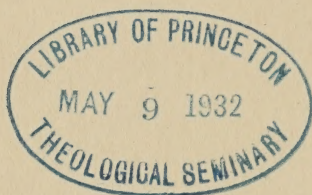


AN INTRODUCTION TO
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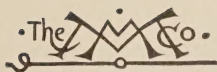
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AN INTRODUCTION TO EDUCATION
AND THE TEACHING PROCESS



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AN INTRODUCTION TO EDUCATION AND THE TEACHING PROCESS

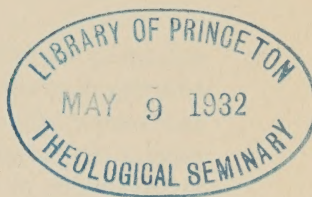
BY
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New York

THE MACMILLAN COMPANY

1932

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Published February, 1932.

PRINTED IN THE UNITED STATES OF AMERICA BY
THE BERWICK & SMITH CO.

PREFACE

This book is first of all a text for students who are preparing to teach. Probably no course in education is more important than the first course a student takes. It is in this course that attitudes of mind are formed which may influence to a large degree the appreciation of all further courses in this field. If the beginning course in education leaves the student with a feeling that its philosophy is sound, its suggestions of practical worth, and its content useful, he will have a more wholesome respect for the entire field of education. If, on the other hand, the introductory course in education leaves him with a feeling that the field is intangible, indefinite, and uninteresting, it is reasonable to assume that if he enrolls for further professional courses he will do so with reservations and misgivings. The authors have been keenly conscious of this fact and have endeavored to write a book for the beginning course in education which will:

1. Be convincing in its philosophical soundness.
2. Aid in developing the desirable concomitant learnings.
3. Offer a sound content that will help the beginning student to realize the worth of education both as a philosophy and as a science.
4. Give that feeling of practical worth, so often lacking in professional courses.
5. Engender such attitudes as will place education in that most desirable rôle sometimes referred to as a field of "leading on activities."

The content of this book has been selected with the purpose of making it not only an introduction to education, but also an introduction to the teaching process. Before a person decides definitely whether to become a teacher, he should have

an opportunity to study carefully some of the teacher's problems and should be introduced to the field of education. There are thousands of students in the liberal arts colleges and in the teachers colleges in this country who have not fully made up their minds to enter the teaching profession. It is the purpose of this book to be of assistance in aiding them to determine whether they are properly qualified and whether they really want to become teachers; and in addition to give them definite, concrete suggestions concerning the work of a teacher.

The second purpose for which this book has been prepared is to supply a means of professional improvement for teachers in service. There are large numbers of teachers in the United States who are each year adding to their professional equipment through carefully planned reading. It is the hope of the authors that this book may be found interesting, stimulating, and helpful to this large group of teachers.

In writing a book on the introduction to education, one of two methods may be employed. Chapters dealing with such subjects as the philosophy of education and the meaning of education may be discussed first with an analytical discussion following. The other method is to incorporate in the first part of the book those chapters that bear upon the more practical subjects and leave questions of philosophical discussion until the latter part of the text. The authors have chosen the second plan for two reasons:

1. It is important for the student to think clearly and logically from the beginning. It is discouraging to the student if his introduction to the field of education confuses and bewilders him.
2. The student will be far more interested in such questions as Why choose the teaching profession?, and, What qualities should one possess who hopes to become a successful teacher? than he will in an attempted definition and interpretation of the meaning of education.

The blank sheets following each chapter will be found useful for adding to the bibliographies found in the text. They will encourage students early in their college careers to form the

habit of collecting material which may be found useful in future work.

The authors desire to express their sincere appreciation to all of those who have in any way contributed to this volume. It would be impossible in some cases to trace the origin of some of the ideas expressed in this text, but in every case where the authors were conscious of such origin, full credit has been given. To the authors whose materials we have quoted, whether from books or magazines, and to the publishers who have been so generous in their permissions, we hereby express our gratitude. We hope that the students who use this text will read further in the books from which we have quoted and that their lives will be enriched through such reading.

JESSE E. ADAMS

WILLIAM S. TAYLOR

LEXINGTON, KY.
January, 1932

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PART I
THE TEACHER

CHAPTER I

TEACHING AS A LIFE WORK

Before a great gathering of teachers a few years ago, one of the really great men of our country was scheduled to give an address. When he arose to speak he received a tremendous ovation. Just before beginning his address he asked for permission to make a few remarks that were not directly connected with the theme of his subject. He then said, "I want to pay tribute to Mr. —, who was my teacher in the town of X. I wanted to quit school when I was thirteen years of age and I would have done so had it not been for the encouragement of this teacher, but under the influence of this teacher's dynamic personality I was made to realize that my life could count for something and that at least one person wanted to help me make good. It was this teacher that lighted in me the spark of ambition that made me try, and that made me love some of the things I once did not appreciate and thus see life in a new perspective. I hope, if any of you are from this town and know my teacher, that you will tell him I want him to share this applause you have so generously given me to-night."

When this message was conveyed to that teacher, who was then past sixty-five years of age, a smile came over his face as he said, "Isn't it great to be a teacher?" and then without waiting for an answer to his question he quoted the following bit of philosophy:

I took a piece of living clay,
And gently formed it day by day,
And molded with my power and art
A young child's soft and yielding heart.
I came again when years were gone—
It was a man I looked upon,
He still that early impress bore,
And I could change it nevermore.

He was a teacher whose reward was not one of money, for his income was meager. It was not the reward of political prestige, for he was almost unknown by the politicians. It was the reward that comes in return for years of service, the fruitage reaped from a life well spent.

Conscientious and successful teachers everywhere testify to the fact that one of the hardest things in life is to quit the teaching profession. Not always can they tell why they find it so attractive. The real satisfactions that come to the teacher cannot always be expressed in tangible, objective terms. It will be the purpose of this chapter, however, to point out some of the reasons why teaching is so attractive to those who make a success of it.

The readers of this text in many instances will be those young men and women in the universities and teachers colleges who have not decided what type of work they wish to make their life work. Certainly no one should enter into a profession that he expects to pursue for a lifetime without giving it the most careful thought and study. The choosing of a lifetime vocation has results that reach much farther than most people realize. It is not too much to say that when one decides on his lifetime occupation or profession, he has within limits decided who his wife will be, who his associates and friends are to be, and whether or not he is destined to live a life of whole-hearted purpose and happiness or one of half-hearted enthusiasm and sorrow. The writers believe that one of the best ways to get happiness out of life during the few years that we dwell upon this planet is to engage in an occupation into which one can and will throw his whole heart and soul. Surely, then, no one should enter upon any kind of work that he expects to make a life proposition without carefully weighing its attractions. This is especially true of those who are contemplating the teaching profession. It is probably truer in the teaching profession than in any other that anyone who is not happy in the work is destined for failure.

What, then, are some of the reasons why bright, capable young people should contemplate the teaching profession as a life work?

The complexity of the teaching profession is unusually great. The work of teaching is complex enough to challenge the most capable, and it should be kept in mind that it is through strenuous work that men and women grow. New problems continually arise and they are of such magnitude that many of the biggest men of the country are giving their lives to the solution of some of them. Men could spend their whole lives in an endeavor to improve the subject of reading alone. In fact, some of the best men in the educational field today are intensely interested in this subject. One has but to recall such men as Dr. Ernest Horn of the University of Iowa, Dean W. S. Gray of the University of Chicago, Dr. Arthur I. Gates of Teachers College, Columbia University, and many others to realize the magnitude of the problems in this field alone. And so it is with almost any other phase of education one may wish to choose. A mere roll call of all the writers on the curriculum today would involve a good part of this chapter if one wished merely to catalog their names. Problems of educational administration, testing and measuring, methods of instruction, learning and teaching, require the intellect and thinking of thousands of our very best minds. Departments of research, supervision, higher education, health work, character education, vocational education, *ad infinitum*, make demands for the best brains of our land. These problems present themselves from the local standpoint, the state standpoint, and the federal standpoint. The results of their solution affect not only present lives, but the lives of unborn millions. In fact, it is not too much to say that on their solution rests the destiny of our nation. Surely no one need stay out of the teaching profession because it is not complex enough or because it does not present enough challenging problems. The problems are not only complex but are also unceasing.

The teaching profession helps one to retain his youth. It has often been said that one can always detect teachers in a group. The inference in the past was that teachers possessed such traits as temerity, evidences of old age, unsociableness, characteristics of poverty, depressed appearance, and the like. It is

doubtful whether such traits were ever possessed by the teaching profession in any greater abundance than by other professions. Certainly it is not descriptive of the teaching profession any longer. Indeed, there is every reason to believe today that just the opposite is true. It may still be possible to pick out the teacher, but if so one must be on the lookout for persons with poise, youth, vigor, beauty; and persons who are well dressed, with good manners, and with all the earmarks of the cultivated and the well-bred. Such traits do not come to teachers by accident. They come through association and training. Their constant responses to the enthusiasm and buoyancy of childhood and adolescence help to retain their youth. It is in youth that one has dreams and visions, and builds aircastles and plans. It is in youth that one finds vigor and lightheartedness, sprightliness and optimism, and it is in teachers that one finds these characteristics reflected to a greater extent than in any other group. No teacher can enter into the play spirit of children and associate with them in their joys and their games and fail to perpetuate these same characteristics in her own life.

Another reason teaching helps to retain one's youth is that it constantly presents new problems. One who "keeps up" in the teaching profession will find that he is relatively free from "ruts." It is true that many of the activities of the teacher are of a routine nature and should become mechanized, but there always remain the thousands of new problems that present themselves for solution, and force the teacher to maintain an open-minded attitude in order to solve them. Skilled labor in industries must mechanize its movements and activities. Such activities will show but little variation from day to day. Not so with the teacher. The teacher with two years', ten years', and forty years' experience, just as the beginning teacher, will testify to the new problems which knock at the door for admittance every day. It has been said that teachers of the eighteenth century were recruited from the church sextons, the bell ringers, the grave diggers, the artisans, the cripples, and the old dames.

It may likewise be said that the teacher of the twentieth century is recruited from the capable, the cultured, the specially trained, the physically strong, and the alert.

The economic returns from teaching are quite adequate for a simple and frugal life.—1. THE TEACHER'S SALARY. While the economic rewards for teaching do not yet compete with big incomes made in business circles, it is true that for the most part the salary of the trained teacher is sufficient for a simple and frugal life. Moreover, there are very attractive salaries for the person engaged in teaching or administration if he wishes to climb toward the top. In the year 1928 more than \$2,100,000,000 was spent for public elementary and secondary schools in the United States, and of this amount approximately fifty-five per cent was spent on salaries. Of course, this money for salaries was not evenly distributed and there were many localities where the salary of the teacher was pitifully low, but for the most part the well-trained teacher will not be found in the low paid class. In 1928-29¹ the median salary for elementary teachers in sixty-seven cities of more than 100,000 population was \$2,063; in 170 cities of between 30,000 and 100,000 population it was \$1,607; in 308 cities of between 10,000 and 30,000 population the median salary was \$1,415; in 342 cities of between 5,000 and 10,000 population it was \$1,342; and in 514 cities of between 2,500 and 5,000 population it was \$1,212. In these same groups of cities the median salaries for junior high school teachers were \$2,348, \$1,843, \$1,634, \$1,528, and \$1,399 respectively. The median salaries for senior high school teachers in these five groups of cities were \$2,680, \$2,120, \$1,869, \$1,729, and \$1,584 respectively. For supervising elementary principals the median salaries in these groups of cities were \$3,443, \$2,616, \$2,338, \$2,235, and \$2,360 respectively. For the senior high school principals the median salaries were \$4,922, \$4,193, \$3,574, \$2,950, and \$2,478. For the city superintendents the median salaries in the five groups respectively were \$10,227,

¹ *Research Bulletin of the National Education Association*, Volume 7, Number 3, May 1929, pages 115 and 148.

\$6,723, \$5,137, \$4,192, and \$3,567. When one reflects that the median is the measure of the mid-point on the scale only, he can see that there is quite a distribution of salary wages for workers in education. In fact, when one notes the maximum salaries for the different workers in education he will be more impressed than ever that the salary rewards are quite attractive if one climbs toward the top of the scale.

The maximum salary paid teachers in cities of above 100,000 population ¹ is reported as more than \$4,200 and the maximum salaries paid principals as more than \$7,000. In cities of from 30,000 to 100,000 population the maximum salary for teachers is over \$4,000 and for principals the salary is over \$6,000. Other figures might be presented here but these are sufficient to point out to the reader that when one enters the teaching profession the field for promotion is almost unlimited if he but prepares sufficiently and does his work successfully so as to be entitled to the promotions.

2. PROVISIONS FOR TEACHER RETIREMENT ARE ATTRACTIVE. A second reason for looking upon teaching as an attractive profession from an economic standpoint is the reward offered in the way of retirement. There can be no doubt about the comfort and satisfaction teachers get from a sound retirement plan. It sets up a plan whereby every teacher, upon attaining old age and infirmity, can have some provision made for retirement. A well-founded teacher retirement law should help to attract bright, capable young people to the profession as a life work because: ²

1. It compensates for the lower remuneration that teaching offers during active service.

2. It increases the dignity of the teaching profession by keeping its ranks free of those incapacitated by old age.

3. It makes each year of teaching service a step toward independence in old age.

¹ *Ibid.*, May 1929, pages 114, 117, 122, and 125.

² *Research Bulletin of the National Education Association*, Volume 4, Number 3, May 1926, pages 114-115.

4. It lengthens the period of teaching efficiency by relieving the teacher's mind of the fear of a destitute old age.

5. It makes it possible for a teacher to invest in study, training and travel without endangering the provision made for her later years.

6. It makes it unnecessary for capable people to seek other employment than teaching in order to provide for their old age.

In short, the teacher retirement system is a financial measure intended as a guarantee against economic want during old age or incapacitation. Such a plan ought to attract young people who are interested in teaching not as a commercial undertaking but as a fine art, and people who want to work with children and who want freedom from financial worries.

The importance of a state-wide teacher retirement law seems quite fully recognized. Already there are state teacher retirement laws in effect in the following states: ¹

Arizona	Nevada
California	New Jersey
Connecticut	New York
District of Columbia	(N.Y.C. not included)
Illinois	North Dakota
Indiana	Ohio
Maine	Pennsylvania
Maryland	Rhode Island
Massachusetts	Vermont
Michigan	Virginia
Minnesota	Washington
Montana	Wisconsin

A number of other states have retirement laws, but for some reason or other they are not state-wide.

Many of the rewards of teaching are other than economic. Teachers enjoy the peculiar advantage of being rewarded for their services in ways other than by economic returns. Among these other rewards may be mentioned:

1. **INTELLECTUAL COMPANIONSHIP.** There are a number of professions in which one's associates at times will be those

¹ *Research Bulletin of the National Education Association*, Volume 8, Number 5, November 1930, page 230.

primarily interested in intellectual pursuits. In this respect, though, the teaching profession doubtless excels all of them. The physician spends most of his time with those who are very slightly, if at all, interested in intellectual uplift. The lawyer finds his client more interested in getting out of trouble or disputes than he is in mental nourishment. The minister finds many people who are solicitous about their souls' welfare but not particularly about the welfare of their minds. With the teacher, however, her associates are constantly seeking new knowledge. From the children in the schoolroom to her associates in the teachers' meetings and in the educational associations, there is always the intellectual stimulus. To people who are thus interested and who have caught the thrill of intellectual enlightenment, there are few rewards this side of heaven that equal it for sheer enjoyment. Appreciation of food depends upon hunger, and relish for water depends on thirst. In the same way the intellectual stimulus which comes from mingling with associates in the teaching profession depends on the ability to react with appreciation to the stimulus.

2. A LARGE NUMBER OF FRIENDS. A teacher has an unusual advantage in making a large number of friends, although her range of acquaintances is usually somewhat narrow. Her position in the community usually assures her of a status considerably above the average. Then, in addition to this, the very nature of her work has a radiating effect in making friends. She may have only thirty pupils in her classroom, but these thirty may represent thirty different families, and every member knows the teacher either directly or by reputation. The teacher is an active participant, if not the leader, in the social life of the community. This makes her one of the best known in the community. Teachers also have a fine opportunity for making acquaintances through travel and writing. Such contacts, coupled with the chance to gain friends through attendance at universities and educational associations, will almost surely bring a teacher a large number of friends if she is at all inclined to win them.

3. THE REWARDS OF WORKING IN A WORTHY CAUSE. Psychologists are agreed that nothing contributes more to the joy of one's work than a feeling that the work is worthwhile. The service rendered by teachers is indispensable to the life of the community and the state. Education is the rock upon which a democratic government must rest, and it is equally the basis upon which life must exist. Let the past experience of the race be forgotten and ninety per cent of the inhabitants of New York would be dead in a month. Biologically we are becoming more and more fitted to live with the help of our social heritage and less and less fitted to live without it. When one reflects that it is the teacher who is engaged in the important business of passing on this priceless heritage, it is not too much to say that no calling can be more worthy than that of the teaching profession.

Moreover, it is the function of education to raise standards of living to a higher plane. The biographies of great men reveal the fact that education is doing this all the time. In telling of his introduction to Hampton Institute, Booker T. Washington wrote as follows:

When I reached Hampton and presented myself as a candidate for admission to the school, the instructors who saw me at first were not at all certain that they cared to enroll me as a pupil, a fact at which I do not wonder, as I remember the appearance I must have presented to them. It had taken considerable time for me to make the journey over the mountains. I had walked a good share of the way, and had often slept in barns, before I had occupied my lodging under the sidewalk in Richmond. My clothes had been none too good when I started; they were much worse when I reached my journey's end. I wanted to stay, and pleaded to be allowed to do so. I said I would work. They wanted to know what I could do. I told them what I had been doing. Finally one of the instructors took me to a room which needed sweeping, gave me a broom, and told me to see how well I could clean the room. I suppose I swept and dusted that room as many as four or five times before I was satisfied with it. Then one of the lady teachers came and inspected my work, and reported that it was satisfactory. That was my entrance examination. I passed it successfully, and was allowed to stay.¹

¹ From *The Basis of Practical Teaching*, with the permission of the author, E. B. Bryan, and the publisher, Silver, Burdett and Company.

4. AN OPPORTUNITY TO TRAVEL. Progressive school administrators agree that it contributes to a right professional attitude for teachers to take leaves of absence for travel and study. At present a small percentage of the public schools permit a leave of absence with pay, but leave of absence without pay is much more extensive.¹ Approximately sixty per cent of the cities with a population between 10,000 and 30,000 grant leaves of absence for professional improvement. The corresponding percentage for cities of 30,000 to 100,000 and cities of above 100,000 are eighty and ninety-two respectively. Only nine per cent of the 828 cities which grant leaves of absence pay any salary, and of these, thirty cities pay one-half salary or more. However, the tendency to grant a leave of absence with pay is increasing. Already in the higher institutions of learning it is quite a common practice to grant leaves of absence with pay (usually full pay one semester for every seven years of service) and there is a strong possibility that this practice will find its way into the public elementary and secondary fields. Even when a leave of absence is granted without pay it is almost sure to increase the economic rewards of the teacher because it betters her position through study and travel.

Teaching is a leading-on activity—one keeps on learning. It is difficult to conceive of a profession that has a greater tendency to lead on or stimulate one to further advancement than the profession of teaching. A very small percentage of physicians go to school at regular intervals after they have once been licensed to practice. Probably the profession of law (at least those who completed the regular law course before starting to practice) shows a still smaller percentage. But with the teacher the standards are continually rising. There seems to be no such thing as completing a teacher-curriculum and then being content to work for life without taking additional courses at the higher institutions of learning. Not only is a rising standard an incentive to continue one's schooling, but the desire to become

¹ *Research Bulletin of the National Education Association*, Volume 6, Number 4, September 1928, page 225.

a more efficient and better teacher seems quite strong in the teaching profession. Thousands of teachers will testify to the stimulus received from attending teachers' associations, as well as from the desire to improve because of the association with their fellows in their own local systems. On every hand one is impressed with the discovery of new techniques in method and experimentation, and since no progressive teacher wants to "be behind," the natural reaction is to go to school one or more terms and find out about the new fields. Adams ¹ found in a tabulation of 10,196 questionnaires from teachers in Kentucky that 45.6 per cent of the teachers in the state attended a higher institution of learning in the year 1925-26. There was also a slight increase in the percentage of teachers who attended classes during the three years 1923-24, 1924-25, and 1925-26. Other states show a similar tendency. Certainly a profession which inspires approximately fifty per cent of its members to attend school for one or more terms every year, is entitled to be classed as a profession which tends to lead on. In this connection it should be kept in mind that there is no better way to measure one's position in life than by measuring the direction in which one is moving. Hence activities that lead on should be prized most highly.

Associated opportunities such as writing and lecturing are often connected with teaching. The multiplicity of books and lectures today show that more people than ever before are making their contribution in these ways. The teaching profession presents unusual opportunities for carrying on both of these activities. Methods of teaching, school administration, the curriculum, and the many other phases of education are changing so rapidly that a teacher who has something to contribute and is inclined to write has an excellent opportunity for making his contribution in this way. Many teachers, particularly in our higher institutions of learning, are getting greater returns in royalties from their writings than they are from their regular salaries.

¹ Adams, J. E., "A Study in the Equalization of Educational Opportunities in Kentucky," *Bulletin of the University of Kentucky*, 1928, Volume 20, Number 9, page 71.

Lecturing also offers opportunities to those who can make a success at it. The opportunities offered for commencement addresses, for lectures at educational associations, and various types of chautauqua work, especially during the summer, make it possible for one to make many friends, to grow through the stimulus of associations, to render a great service to society, and at the same time to supplement his income by small amounts.

A short working day and relatively long vacations usually accompany the teaching profession. The actual hours that teachers must be on the job in most schools are from about nine to twelve and one to four, for five days in the week. It is, of course, true that the teacher usually grades papers, prepares reports, and works on lessons outside of school hours. In fact, any progressive teacher must do this. However, as one grows more proficient in his subject and in his teaching, the work required outside of school hours will become relatively less. Even the beginning teacher does not find the demands on his time outside of school hours too great for a happy social life. There are few occupations in which one of the six working days every week is given as a vacation. Also there are few types of work that afford as long vacations during the year as is customary in the teaching profession. In the public schools a short vacation at Thanksgiving time, two weeks during the Christmas season, and two or three months during the summer are about the minimum vacations allowed in almost any school. Of course, it is true that the teacher's pay does not continue during the vacation, but usually the time can be spent in such a way that some financial remuneration can be realized if one so desires.

In the teaching profession one is relatively free from objectionable bossing. It is a trait of human nature to desire freedom and an opportunity to express initiative. The initiative of an individual has to be crushed before he is satisfied in a position where he is told in no uncertain terms just what is to be done and how he is to do it. In the teaching profession one may enjoy an unusual degree of freedom from bossiness. The teach-

ing job is a coöperative enterprise. More than ever before administrators are seeking to enlist the whole-hearted coöperation of their faculties. The curriculum is no longer made up and handed to the teacher as a detailed document already prepared for presentation. Instead, teachers are formed into committees to help work out the curriculum, to decide what will be included in the content and to offer suggestions as to the best methods of presenting it. Courses in school organization are offered in the teacher training curriculum for the purpose of enabling the teacher to conceive the school work from the administrator's point of view, so that greater coöperation will be realized. In supervision, emphasis is put on the fact that it is a coöperative enterprise, and that supervisors do not tell teachers that they *must* do anything. In other words, the whole educative process is looked upon as resting essentially upon coöperation rather than bossiness, expression rather than suppression, initiative rather than subjection, and freedom rather than obedience. Few professions, if any, will excel the teaching profession in these respects.

The teaching profession offers an opportunity to specialize to the highest degree. The tendency in life is toward specialization. The teaching profession does not lag behind in this respect. One can spend a lifetime in the field of literature or history or education. Indeed, he can spend a lifetime in any one of the subdivisions of these subjects if he wishes. In education alone he can choose the curriculum for a life of study, or he can choose administration, or philosophy of education, or research in education, or scores of other fields—all subdivisions under the heading, education. There is, in fact, no limit to which specialization can be carried on in that great profession we call teaching.

The teaching profession offers wonderful opportunities for the study of human nature. The extent to which the troubles of life are due to a conflict of personalities has never been estimated. Undoubtedly it is quite large. The teacher has a fine opportunity for studying human nature and getting an insight into

the personalities of individuals. Housed in the room day after day with thirty or forty different personalities, each an outgrowth of many other contributing personalities, the teacher is offered a fine laboratory in which to study the different traits of individuals. In addition to this, the successful teacher has learned to study the personality traits of the parents of the children as well as other people in the community. Also, as a student coming in contact with large groups of other students, one cannot help noting the differences in personalities. Even though it be said that the teacher does not come in contact with as many people as she might in some other profession, there can be no denying that she studies her associates more constantly and at closer range.

Teaching is the biggest single business in America. The total expended for elementary and secondary education in America in 1928 was slightly more than \$2,000,000,000. In addition to this, higher education received almost \$500,000,000. The estimated worth of the school property is approximately \$5,500,000,000.

There are enrolled in the teaching profession of the United States approximately 970,000 teachers. The number of individuals enrolled in the schools and colleges is approximately 30,000,000. Then when one estimates the number of parents who are directly interested in the schools and the number of taxpayers who contribute to the support of the schools, he gets some conception of the magnitude of the efforts being put forth in behalf of education in America. Anyone contemplating entering the teaching profession can rest assured of two of its characteristics.

1. It is based upon a sound and stable foundation. It is not a business in which one takes a chance on stability. The teaching profession will last as long as our government will last and will continue to increase in importance.

2. It is one of the biggest businesses one can enter. If one wishes some evidences of this, let him attend a state teachers' association in one of our modern states. If he gets a thrill from big groups, this is the place to get it.

The teaching profession offers many opportunities for leadership. The teacher has a fine opportunity to learn to be a leader if she but has that strength of character and mastery of the situation that is demanded. The teacher's opportunities to lead are legion. To guide pupils deftly in their collective attacks on problems of the schoolroom requires leadership of the highest type. The opportunities to lead in extra-curricular activities are continually presenting themselves. In addition to these opportunities the teacher is continually in demand as a leader in the different organizations of the community where she teaches, and it is not amiss to say that many opportunities for leadership in her own profession will come to the teacher who demonstrates her ability. On every hand in American organizations and gatherings we are impressed with the crying need for leadership. Leaders with vision, tact, and strength of character, who can make the thing move, and who can enlist the united efforts and will power of the group will ever be in demand. No better opportunity for developing these characteristics and acting in the capacity of leader can be found than the opportunity presented to one who enrolls in the teaching profession.

The teaching profession stimulates one to a life of purity and goodness. There are several reasons for believing that the temptations to go wrong in the teaching profession are relatively few. In the first place, the moral standard that has been built up in the teaching profession is very high. One of the basic functions of the teacher is that of developing in individuals a high type of moral habits, and more and more it is being realized that to do this the teacher must first develop in herself a high standard of moral qualities. It is difficult to make a success at teaching precepts one does not care to follow.

In the second place, the teacher is apt to be surrounded by the innocence of childhood, and just as one cannot live in the atmosphere of beautiful pieces of art, or fine music, or cultural enlightenment without being influenced by one's surroundings, so it is impossible to associate with the innocence of childhood and not be influenced by it.

In the third place, teachers are not tempted through big financial deals to go wrong. If it can be said that the love of money is the root of all evil, it can also be said that handling no great financial sums helps to remove from teachers temptations that may come to other people. On the other hand, since the teacher's salary is usually sufficient for a simple and frugal life, there is no particular reason for coveting large sums of money or taking part in any crooked deals which might enlarge one's income.

For many other reasons bright, capable young people may contemplate the teaching profession as one in which they can well afford to devote a life of service. The thirteen given, however, are sufficient to call attention to the great opportunities and rewards which it offers to those who are willing to labor, to serve, and to enjoy life.

QUESTIONS AND EXERCISES

1. In what way does the tendency to increase the age of compulsory education affect one's probable opportunities for teaching?
2. Draw up a list of principles on which a sound state-wide teacher retirement law should be based.
3. How will the tendency to establish research bureaus in public school systems affect the problem of new opportunities in teaching?
4. What are the dangers in a teacher supplementing his income by writing life insurance? Would it be just as dangerous if he supplemented his income by lecturing or writing books?
5. Is teaching a profession? Justify your answer.
6. What effect will a pension system be likely to have upon the salary schedule of teachers? Is a pension for teachers any more justifiable than a pension for farmers?
7. Is it inevitable that the law of supply and demand must eventually determine the salary of teachers in the same way that it determines the price of wheat?
8. Collect statistics on the educational school systems of America to show that "teaching is the biggest single business in America."
9. Show that it is to the best interests of the public to insist that teachers be well paid.
10. What are the objections to using teaching as a "stepping stone" to other professions? Would it be equally objectionable to use other professions as a "stepping stone" to the teaching profession.
11. To what extent do you agree with the following statement:

The teaching staff of any educational institution is its most essential item of equipment. Providing suitable teachers for American high schools is a task so colossal that our civilization is staggered in its effort to meet the demand. . . . Our ability or inability to provide competent teachers will determine the success or failure of the American experiment of universal secondary education.

—Charles H. Judd. (Quoted from *The Phi Delta Kappan*.)

12. Suggest plans whereby teachers might have greater opportunities to travel.
13. Take a volume of *Who's Who in America*, open it at any place you choose, and count the number of teachers in a hundred names. What do your findings indicate as to the opportunities for one in the teaching profession to become distinguished?
14. And what of teaching? Ah, there you have the worst paid, and the best rewarded, of all the vocations. Dare not to enter it unless you love it. For the vast majority of men and women it has no promise of wealth or fame, but they to whom it is dear for its own sake are among the nobility of mankind. I sing the praise of the unknown teacher. Great generals win campaigns, but it is the unknown soldier who wins the war. Famous educators plan new systems of pedagogy, but it is the unknown teacher who delivers and guides the young. He lives in obscurity and contends with hardship. For him no trumpets blare, no chariots wait, no golden decorations are decreed. He keeps the watch along the borders of darkness and makes the attack on the trenches of ignorance and folly. Patient in his daily duty he strives to conquer the evil powers which are the enemies of youth. He awakens sleeping spirits. He quickens the indolent, encourages the eager, and steadies the unstable. He communicates his own joy in learning and shares with boys and girls the best treasures of his mind. He lights many candles which, in later years, will shine back to cheer him. This is his reward. Knowledge may be gained from books; but the love of knowledge is transmitted only by personal contact. No one has deserved better of the republic than the unknown teacher. No one is more worthy to be enrolled in a democratic aristocracy, "king of himself and servant of mankind."—From *The Unknown Teacher*, by Henry Van Dyke.

To what extent do you agree with the above statements?

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ADDITIONAL REFERENCE LISTS

Every student should form the habit early of collecting materials which bear on the fields in which he is studying. This page is inserted in order to help you to do this systematically. Please write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Please write on this page any references, other than those that have been suggested by your instructor, which may bear on this chapter. You may find such references from your reading in other courses, readings in the library, and other sources.

CHAPTER II

ESSENTIAL QUALITIES OF A GOOD TEACHER

To possess the essential qualities of a good teacher is to possess culture, a liberal education, love of learning, love of children, an intimate knowledge of child psychology, a good personality, and the professional training that insures teaching ability.

There are thousands of superior teachers in the profession today. This, however, has not always been true. It has not been long since almost anybody who wanted to enter this occupation found it possible to do so. The qualifications and salaries were so low that the teaching profession held no attractions for the capable. The early history of education in some states would indicate that teachers were recruited in large part from the physically unfit and were often classified according to moral delinquencies. There was the one-armed class, the one-legged class, and the class that got drunk on Sunday and whipped the whole school on Monday.

To study the early qualifications of teachers in an exhaustive way in all of the states would be impossible in so brief a chapter. It will be worthwhile, perhaps, to take a single state and examine the teacher situation in its early history. Pennsylvania offers as interesting a story of its pioneer teachers as almost any other state. A glimpse at the situation presented there may be found helpful in an effort to show that progress has been rapid in the requirements for teaching in the nation.

Pioneer Teachers. The Dutch colony which settled in New Castle on the Delaware sent a request back to the city of Amsterdam for a schoolmaster who would "visit the sick and publicly

read God's word and sing the psalms." Evert Pieterse, who was sent over to the colony in 1657, was examined by the classis and was considered "properly qualified."¹

As a general rule, in the early settlements of America, if the settlers had churches, they had schools; if they had a minister, they had a teacher. The regular clergyman frequently taught the children to read, if for no other reason than to enable them to receive the required instruction in the catechism. It is difficult to procure accurate information concerning the qualifications of these early teachers. Marmaduke Pardu, a teacher in Abington, Pennsylvania, in 1729, came from Wales and brought with him a certificate signed by the curate and twenty-five other persons, stating that he

hath to the utmost of our knowledge & all appearance liv'd a very sober and pious life, demeaning himself according to ye strictest Rules of his profession, viz., what we call Quakerism & he hath for these several years past took upon himself ye keeping of a private school in this citty, in which Station he acquitted himself with ye common approval and to ye general satisfaction of all of us who have committed our children to his care and tuition.²

Henry Melchior Mühlenberg, who was sent to America to study the Reformed and Lutheran church and school situation in Pennsylvania, in speaking of the teachers that he found there said:

Such persons, indeed, were not wanting, who from selfish motives offered themselves as teachers. But experience taught that such not only cared little for the souls of their hearers, but that they also, by their bad life and example, only did the more harm—the disorder of the congregations thereby ever becoming greater and more sad.³

The qualifications prescribed for the teachers of the Reformed schools about 1846 were as follows:

¹ Kilpatrick, William Heard, "Dutch Schools of New Netherlands and Colonial New York," *U. S. Bureau of Education Bulletin*, 1912, Number 12, pages 129–130.

² Wickersham, James Pyle, *History of Education in Pennsylvania*, Inquirer Printing Company, Lancaster, Pennsylvania, 1885, page 83.

³ *Ibid.*, page 131.

He must be qualified in Reading, Writing, Arithmetic, and Singing; and must undergo an examination in these branches. He must be one that takes a lively interest in, and helps to build up the Christian Church; and must also be a God-fearing, virtuous man, and lead an exemplary life, and must himself be a lover of the Word of God, and be diligent in its use as much as possible, among the children of the school; and he must set a good example, especially before the young children, and must avoid exhibitions of anger. He shall willingly and heartily seek to fulfill the duties obligatory upon him, with love to God and to the children; to the performance of which the Lord, their Maker, and Jesus, their Redeemer, have so strongly bound him.¹

Prior to the free school movement in America, teaching was considered such a simple task that almost anybody was thought to be qualified for the work. Discipline was the major problem. If the teacher demanded absolute obedience and maintained strict order, he was usually considered successful. He was supposed to follow the routine of giving instruction in reading, writing, and arithmetic and this, in addition to his discipline and his task of making and mending quill pens was practically his sole duty.

The teaching requirements in so far as the community was concerned were usually low. The only test of scholarship ordinarily made was a test of the ability to draw up an article of agreement for the parents to sign. This article usually set forth the teacher's terms and what he proposed to teach. A teacher who proposed in a winter school to teach as far as the "double rule of three" (compound proportion) was considered very proficient in mathematics. One who proposed to lead a class through "tare and tret" (custom house business) was credited with being a master mathematician. The article of agreement contained the teacher's own statement of his ability and was all the evidence the patrons had by which they could judge his competency.

Itinerant teachers wandered over many states, teaching first in one place and then in another. James Pyle Wickersham described the itinerant teachers in these words:

¹ *Ibid.*, page 141.

As a class their knowledge was limited to the merest elements; they were odd in dress, eccentric in manners, and oftentimes intemperate. In the schoolroom they were generally precise, formal, exacting, and severe. Those who were good scholars, and there were College and University graduates among them, had either failed in some previous undertaking, met disappointment that had soured them against society and driven them to seek a livelihood in comparative isolation, or belonged to a class of queer characters and purposeless adventurers, "cranks," that find their way in large numbers to every new community and float about rudderless on the surface of its affairs.¹

A report from Washington County, Pennsylvania, to the state superintendent of public instruction says that of the early teachers one is represented as a tyrant, another could not write, and another could not cipher beyond the "double rule of three." On the other hand, coupled with the names of these old-time teachers were found such commendations as the following:

Became a Presbyterian preacher; was a good instructor; had a good education; was a surveyor; wrote a beautiful hand; successfully practiced medicine; ran as fox for the boys at noon; was a fine mathematician; a good classical scholar; became chief justice of that State.²

A study of the early educational reports in the Middle West will indicate that many of the teachers were men of intemperate habits. There were, of course, many men of character and talent in charge of the schools. Undoubtedly there was a considerable number of men teaching in these early years who were competent. There was little about the school, however, that invited men of ability and energy to enter the teaching profession. The schools were rarely kept open for more than three months a year. The teacher's salary was uncertain and was exceedingly low. He was usually paid at the rate of two dollars a quarter for each child, his wages seldom amounting to more than ten or twelve dollars a month and frequently not reaching half this sum. Many of these early teachers were self-sacrificing,

¹ Wickersham, James Pyle, *History of Education in Pennsylvania*, Inquirer Printing Company, Lancaster, Pennsylvania, 1885, page 212.

² *Annual Report*, Department of Public Instruction, Harrisburg, Pennsylvania, 1877, page 572.

earnest, and progressive. There are numerous instances where teachers availed themselves of every possible opportunity for growth. Their opportunities for professional improvement, however, were poor.

Throughout all these early years the qualifications, if any at all were prescribed, were low. One of the earliest records of a teacher's examination of which we have an authentic account, was recorded by Oldmixon at Chester, Pennsylvania, in 1708. The record states that Charles Fortescue was examined by the minister and found capable of teaching Latin, Greek, and mathematics.¹ Thomas Meaking had been required to procure a license in 1693, but we do not know the basis for the issue of this license. The contracts between the Lutheran congregations and the schoolmasters frequently required that the teacher prove his ability before the minister.

Until the middle of the nineteenth century or perhaps later, examinations, if any at all were given, were mechanical. Generally speaking, when any examination was made it was made by the board and frequently it was confined mainly to ascertaining the applicant's ability to make or mend a quill pen. If the members of the board satisfied themselves that the applicant would be able to mend a pen so that it would not "let down too much," or so that it would "let down enough," if they were sure that he was fair in arithmetic, were sure that his discipline would be rigid, and if he wasn't too "high-toned" on the question of salary, he was pretty sure to pass.

The attitude of the community toward the education of children has always been a vital factor in the qualifications of teachers. If the community demanded character, ability, and training on the part of those who taught, it usually found men and women who possessed those things. If the community was indifferent to the education of its children this attitude was sure to be reflected in the teachers employed. These two attitudes may be illustrated by two groups of settlers in Pennsylvania.

¹ Wickersham, James Pyle, *History of Education in Pennsylvania*, Inquirer Printing Company, Lancaster, Pennsylvania, 1885, page 97.

Perhaps no group of people who came to Pennsylvania had a greater interest in education than the Quakers, or Friends. The educational policies of William Penn, the great leader of the Friends, materially influenced the early educational development of the Commonwealth. His ideas on the education of children are set forth in the following paragraph of a farewell letter written to his wife and children before sailing from America:

For their learning be liberal. Spare no cost; for by such parsimony all is lost that is saved; but let it be useful knowledge, such as is consistent with truth and godliness, not cherishing a vain conversation or idle mind, but ingenuity mixed with industry is good for the body and mind too. I recommend the useful parts of mathematics, as building houses or ships, measuring, surveying, dialling, navigation; but agriculture is especially in my eye; let my children be husbandmen and housewives; it is industrious, healthy, honest, and of good example.¹

The Friends made legal provision for the instruction of the poor as early as 1683 and required that all children should be taught reading and writing by the time they were twelve years of age. They also required that their children be taught some useful trade or skill. Not only did they provide for this education but they provided for the necessary laws to carry the scheme into effect. The qualifications which they established for teachers for their schools were (1) moral character, (2) membership in the Society of Friends, and (3) competency to teach the subjects for which they were employed.² They found it difficult to procure persons possessing these qualifications, but the committees charged with this responsibility were ever alert and the Quaker schools were among the best of the Colonial days.

The people outside of the better settled regions frequently were not interested in the education of their children. They were more interested in conquering the wilderness in which they

¹ Woody, Thomas, *Early Quaker Education in Pennsylvania*, Teachers College Contributions to Education, New York City, page 29.

² *Ibid.*, page 204.

had settled. As a result, these sturdy pioneers laid little emphasis on anything but brawn and regarded the teacher of children as a person of lowly calling. That the sentiment was unfavorable to schools of any kind in some localities may be seen from the following election return from Logan Township, Center County, Pennsylvania: ¹

At a miting held at the house of Anthony Kleckner, Sr., of Login township, Saturday, the 26th Day of March, 1825, for the Purpose of Detarmining wether their shoulth a School or no School and it appears by the votes that there was Thirty-Three votes for no School and no votes for the School therefore it appeareth that there will be no School certified by us the writer signed as Judges of said miting the Day and year above mentioned:

the Clark	Frederick Freidley	} Judges
John Barner	Anthony Kleckner	

But in spite of this apathy toward education in some communities, subscription or "neighborhood" schools and academies frequently came into existence and contributed much to the furtherance of the educational program of the communities.

Occasionally an enterprising, public-spirited citizen like old Jacob Ake of Blair County, assumed the responsibility for establishing and maintaining a school so that the children might not go untaught. In 1790 Mr. Ake, who owned the land on which Williamsburg now stands, provided a schoolhouse, employed a teacher, opened a school, and defrayed all the expenses so that the children growing up about him might have a chance to obtain at least a minimum of education. For fifteen years he continued operating the school, managing it in his own way. It is reported that he frequently visited the homes of the children, flourishing his staff and hastening them away to school. Because he was so eager to have all children attend school, it was said of him that he disliked children and that it seemed to annoy him to have children on the streets, to see them at play, and to hear them talk. It is a safer assumption that Mr. Ake's great interest in the welfare of the children in the community

¹ *Annual Report*, Department of Public Instruction, Harrisburg, Pennsylvania, 1877, page 136.

prompted him to the generous task of defraying all expenses in connection with the building and maintenance of the school that did so much for the citizenship of Blair County in the early days of the state. Persons who were familiar with the program that Jacob Ake carried on in his school state that however poor the qualifications of his teachers may have been, his school was the beginning of education in Blair County and it paved the way for a larger program of education in later days.

The enactment of the Free School Act in 1834 had a positive effect on the teacher problem. The law provided for a crude form of supervision and provided further that no teacher could receive compensation for his services unless he possessed a certificate. The effect of the Free School Act on the teaching profession was described in the *Pennsylvania School Journal* as follows:

Before the passage of the law in question teaching could scarcely be called a profession. . . . But now there is a difference. In the personal appearance, moral character, and intellectual acquirements of teachers, there has been great improvement. Immoral teachers, and more, incompetent, may still be found; but what was formerly the general rule has become the exception. Teachers are awakening to a proper sense of the dignity and importance of their profession. They are beginning to realize the truth, that to elevate their calling they must elevate themselves. They are seeking light. During the period that the common schools are closed, numbers of teachers may be found in nearly every Academy and Seminary in the State. From these institutions and from our Normal and High Schools, hundreds of young men and young women are annually issuing, and scattering over the State to supply the increased demand for the services of teachers.¹

At the time of the passing of the Free School Act only one institution in Pennsylvania existed primarily for the training of teachers. The Model School in Philadelphia was established in 1818 for the specific purpose of preparing teachers. Numerous academies and colleges offered programs that were planned to help teachers to qualify themselves better for their work. The enrollments in these courses were nearly always gratifying.

¹ *Pennsylvania School Journal*, Lancaster, Pennsylvania, Volume 1. 1853, page 142.

With the passing of the Normal School Act in 1857 progress in qualifications and training of teachers became much more rapid. The laws governing certification of teachers were improved from time to time until in 1930 more than ninety-six per cent of all the teachers in the state met the standard requirements for entrance to the profession, namely, two years of professional training for the elementary school and four years for high school.

Teaching Has Become a Profession. The story of the growth in teacher qualifications in most states is not essentially different from that in Pennsylvania except for dates and other minor details. Teaching has become a profession in America. Desirable minimum standards for entrance to the profession are being prescribed in most states today and only young men and young women who possess sterling character, good personality, good ability, and right attitudes are being admitted to candidacy for the profession.

A number of men writing on the qualifications of teachers recently have indicated that two years of training in a professional school for teaching in the elementary field, and four years of training for the secondary field are both too low. They have suggested that in the next decade or two the more progressive states in the Union will prescribe four years of training for a permanent certificate in the elementary field, and five years of professional training on the college level for high school teaching.

Years of training, however, do not guarantee success in teaching. There are certain traits or qualities that will help one to be an exceptional teacher, and the absence of these traits may prevent one from becoming successful in the profession. What qualities must an individual possess if he is to be a successful teacher? What qualities are lacking in an individual if he is accounted a failure in teaching?

Qualities That Aid or Hinder Teaching. Thousands of dollars have been spent in recent years in an analysis of those traits that are necessary to successful teaching. The study made by

Dr. W. W. Charters and Dr. Douglas Waples, which was financed by the Commonwealth Fund, is perhaps the most comprehensive and carefully done of all the studies that have ever been made of teacher training.

After an exhaustive study, Dr. Charters and Dr. Waples¹ found that there were certain personal traits that, in the minds of American men and women, were essential to good teaching. When these traits were analyzed and condensed, there were twenty-five that stood out more prominently than others as essential to success in the profession. These twenty-five traits with their rank for the senior high school, the junior high school, the intermediate grades, the kindergarten and primary grades, and for the rural school are given in the accompanying table.

This table should be read as follows: Adaptability, the first trait in the list, was rated eighth in importance of the twenty-five traits for the senior high school, tenth for the junior high school, eighth for the intermediate grades, sixth for the kindergarten and primary, and first for the rural school. Thrift, the last named trait in the table, was ranked twenty-fifth for the senior high school, twenty-fifth for the junior high school, twenty-fourth for the intermediate grades, twenty-fifth for the kindergarten-primary grades, and twenty-fourth for the rural school.

These are, in the opinion of authorities on education, the twenty-five most important traits for a teacher to possess. Students in college who expect to prepare for the teaching profession should keep these traits constantly before them. If students rate themselves as deficient in the qualities of adaptability, attractiveness, breadth of interest, accuracy, and others in this list, they should go to work earnestly and intelligently to acquire these traits. If the judgment of these competent critics is correct, every teacher training institution should keep this list carefully in mind and should work out its teacher training curricula so as to develop the traits in this list.

¹ Charters, W. W., and Waples, Douglas, *The Commonwealth Teacher-Training Study*, The University of Chicago Press, 1929, page 18.

TABLE 1

RANK-LIST OF TEACHERS' TRAITS ¹

	RANK FOR TEACHERS OF				
	Grades X-XII Senior H.S.	Grades VII-IX Junior H.S.	Grades III-VI Inter- mediate	Grades Kdg.-II Kdg. Primary	Rural School
1. Adaptability.....	8	10	8	6	1
2. Attractiveness, personal ap- pearance.....	17	14	9	10	15
3. Breadth of interest (interest in community, interest in profes- sion, interest in pupils).....	1	10	11	15	2
4. Carefulness (accuracy, definite- ness, thoroughness).....	11	13	9	14	12
5. Considerateness (appreciative- ness, courtesy, kindness, sym- pathy, tact, unselfishness)....	17	3	1	1	3
6. Cooperation (helpfulness, loy- alty).....	11	9	14	16	3
7. Dependability (consistency)...	14	19	16	17	15
8. Enthusiasm (alertness, anima- tion, inspiration, spontaneity)..	9	4	5	2	11
9. Fluency.....	23	24	25	23	25
10. Forcefulness (courage, decisiv- ness, firmness, independence, purposefulness).....	5	4	18	19	13
11. Good judgment (discretion, foresight, insight, intelligence)	2	1	3	4	3
12. Health.....	16	16	12	10	9
13. Honesty.....	7	12	7	9	6
14. Industry (patience, persever- ance).....	19	8	14	13	17
15. Leadership (initiative, self-con- fidence).....	4	7	19	21	8
16. Magnetism (approachability, cheerfulness, optimism, pleas- antness, sense of humor, soci- ability, pleasing voice, witti- ness).....	11	4	5	3	9
17. Neatness (cleanliness).....	20	16	13	4	18
18. Openmindedness.....	9	20	23	24	22
19. Originality (imaginativeness, resourcefulness).....	22	22	16	12	19
20. Progressiveness (ambition)....	23	23	22	20	22
21. Promptness (dispatch, punc- tuality).....	21	14	20	18	21
22. Refinement (conventionality, good taste, modesty, morality, simplicity).....	14	20	2	8	13
23. Scholarship (intellectual curi- osity).....	5	16	21	21	20
24. Self-control (calmness, dignity, poise, reserve, sobriety).....	2	2	3	6	6
25. Thrift.....	25	25	24	25	24

¹ Charters, W. W., and Waples, Douglas, *The Commonwealth Teacher-Training Study*, The University of Chicago Press, 1929, page 18.

The authors of the *Commonwealth Teacher-Training Study*, in discussing the use to be made of these findings, say: ¹

That traits of character and personality are important in teaching has always been recognized, but systematic procedures for incorporating character traits with other curriculum elements have not been adequately developed. Discussion of the problem and empirical methods of solving it may be found in occasional lectures, in casual emphasis of certain traits when advising individual students, and in professional literature of an inspirational sort which discusses the importance of certain major traits and gives occasional examples of methods whereby particular traits have been developed in prospective teachers and teachers in service. But nowhere to the best of our knowledge has a technique for the identification of character traits been clearly defined with reference to teachers in training.

Increasingly within the last two decades traits have been included in materials used in the selection of teachers and in the evaluation of teaching. Ordinarily in the form of rating scales or check-lists bearing descriptions of specific traits, a wide variety of qualities of teachers have been listed by administrators, college employment officers, teachers' agencies, and other supervisory groups.

But in the use of traits for local supervisory purposes, there has been no agreement, and little effort to secure agreement, upon the conspicuous traits or qualities of successful or unsuccessful teachers in general. The cause for this very probably lies in the fact that no objective techniques have been evolved to determine the essential traits. Each person or committee responsible for the selection of a list for some practical purpose has proceeded either to prepare his own list or to accept one prepared by others according to highly subjective criteria. In the present study, therefore, an attempt was made to devise techniques whereby essential traits may be defined more objectively.

What traits or qualities are lacking in teachers who fail in the profession? If teachers could only know which traits they lack, they might be able to acquire them, and instead of failing in their work, they might be able to build for themselves those qualities that would enable them to succeed.

Some years ago a study was made of the chief causes of failure on the part of teachers. This study indicated twenty-five causes

¹ Charters, W. W., and Waples, Douglas, *The Commonwealth Teacher-Training Study*, The University of Chicago Press, 1929, page 51.

as more prevalent than any others. These are rated in the order of their importance; weakness of discipline came first, and attendance at places of questionable amusement was the smallest cause of failure among the twenty-five.

TABLE 2

 TWENTY-FIVE OF THE MORE PREVALENT CAUSES OF FAILURE ¹

	CHIEF CAUSE	CONTRIB- UTORY CAUSE	TOTAL
1. Weakness in discipline	114	54	168
2. Lack of judgment	45	86	131
3. Deficiency in scholarship	42	40	82
4. Poor methods	41	79	120
5. Insufficient daily preparation	23	51	74
6. Lack of industry	19	28	47
7. Lack of sympathy	17	45	62
8. Nervousness	15	30	45
9. Deficiency in social qualities	15	27	42
10. Unprofessional attitudes	14	28	42
11. Unattractive appearance	12	29	41
12. Poor health	12	13	25
13. Lack of culture and refinement	11	28	39
14. No interest in work of teaching	10	26	36
15. Too many outside interests	10	23	33
16. Immorality	10	1	11
17. Frivolity	9	17	26
18. Disloyalty	9	16	25
19. Failure to control temper	7	23	30
20. Deceitfulness	7	19	26
21. Untidiness in dress	7	14	21
22. Remaining too long	5	17	22
23. Immaturity	3	13	16
24. Wrong religious views (for that community).	2	3	5
25. Attending places of questionable amusement	1	8	9

Is it possible for an individual to develop the desirable qualities of a good teacher? Is it possible for one to correct the weaknesses he now has, to eliminate the causes of failure if he possesses any of the weaknesses under the causes of failure? Is it possible for an individual to acquire those traits that have been listed as necessary to good teaching? Teacher training institutions

¹ Buellesfield, Henry, "Causes of Failure Among Teachers," *Educational Administration and Supervision*, September, 1915, Warwick and York, Baltimore.

believe that within limits these things are possible. Curricula are being developed today and work is being planned to enable young men and young women who are seriously interested in going into the teaching profession to acquire traits that will make for successful teaching, and to eliminate traits that cause failure.

The time has come in our teacher training program when general intelligence is of major importance in the selection of candidates for teaching. Dr. Grover T. Somers ¹ in his study for predicting the success of prospective teachers found that "after allowing for all other measured influencing factors, a residual correlation (though small) still remains between test ability and accomplishment. There appears to be a point below which good intentions and other traits, however worthy and commendable, do not compensate for this lack of a modicum of intelligence in excess of that possessed by a few high school 'graduates.' "

This study was completed in 1923. Since that time professional schools for the training of teachers have given more and more attention in the selection of candidates to general intelligence. Some universities give college marks on the A, B, C, D, and E basis and require a standing of B for registration in the college of education. Other institutions are setting up requirements for entrance into the practice teaching course of a standing at least comparable to the median student of the university. Such a plan will admit to practice teaching only the upper fifty per cent of the student body.

The time has long since passed when just anybody with good intentions can enter the teaching profession. Communities will no longer employ a person to teach their children merely because the individual or the individual's family happen to be in economic need. Thousands of people have been saved from becoming charitable cases in the past because an indulgent community provided work in teaching positions at the children's expense. Parents as well as school administrators today are demanding men and women of ability as teachers in our schools.

¹ Somers, Grover T., *Pedagogical Prognosis*, Teachers College Contributions to Education, 1923, pages 125 and 126.

It is safe to say that the time is not far distant when it will be unusual to admit any person to the teaching profession who does not possess a scholastic standing sufficient to place him in the upper fifty per cent of the student body of our universities and colleges.

Personality. Of as great significance perhaps as any other factor in the selection of teachers is the personality of the individual. Quoting again from Dr. Somers,¹

Personality as measured by estimates of teachers exhibits a relatively close relationship to an individual's success as student and to her achievement as teacher, to the extent indicated by correlations of $+ .72$ and $+ .61$; and those traits considered important to the teacher's equipment are present in the recruit and identifiable to the degree and amount suggested by the latter coefficient.

This is a high coefficient of correlation and indicates the relationship of personality to success in teaching.

One of the easily recognizable qualities of personality is personal appearance. There is a high degree of relationship between personal appearance and success in teaching. Generally speaking, persons who are seriously deformed, who have bad facial disfigurements or who are otherwise personally unattractive should not attempt to prepare for teaching. In a few instances in the past such persons have become successful teachers. But it takes a man or a woman of exceptional ability and of remarkable interest and enthusiasm to overcome such handicaps. The person who always dresses in good taste, who is clean, neat, and attractive in appearance, has a much larger chance of success than the person who has never learned the value of good appearance.

Knowledge. A teacher cannot teach what she does not know. There are still thousands of schools in the United States where no specific knowledge requirements are made for teaching. There are many states in the Union where a teacher who is a college graduate is assured a license to teach any subject in the high school. As a consequence there are hundreds and hundreds of teachers attempting to teach subjects in which they have not had one hour of college training.

¹ *Ibid.*, page 126.

A recent survey in a southern state showed the median number of hours of training for beginning teachers in high schools in that state as follows: Latin 0; agriculture 0; commercial subjects 0; English 20; mathematics 6.5; French 15; Spanish 18; chemistry 8.5; physics 5; economics 0; sociology 0.

No teacher should be certificated to teach any subject in high school in which she has not had adequate subject-matter training. The more progressive states and the more progressive communities in many of the poorer states recognize this and are setting up specific subject-matter requirements for the teachers they employ. But knowledge implies that the teacher should have something more than subject matter. The elementary school teacher, the high school teacher, and the college teacher must know thoroughly the subjects they teach, but it is just as necessary for them to have a broad, liberal education and a thorough professional education.

A. R. Brubacher in his *Plain Talk to Teachers* says: ¹

Civilization advances in accordance with the quality of teaching service. The influence of the great teacher extends through many generations, doing high service beyond the limits of his natural life. It transcends geographical and national boundaries. Witness Socrates and Jesus. Judged by the character of the service rendered, teachers clearly form a distinctive and homogeneous group, which by its peculiar knowledge and special skill controls the general community welfare.

The teacher necessarily professes knowledge on the subject he essays to teach. Generally speaking, then, he should have a liberal education in the best sense.

That he should "Know something about everything and everything about something" is a hard saying but a true one. And then there is a body of scientific and technical knowledge relating solely to the art of teaching, which must be mastered. With this special knowledge goes a related skill. Persons who have this prerequisite liberal education and the special knowledge and skill are experts, differentiated from tradesmen and purveyors of commodities, forming a group which may be called a profession under the most rigorous definition of that term.

¹ Holmes, Henry W., and Fowler, Burton P., *The Path of Learning*, Little, Brown, and Company, 1926, page 451.

A teacher who knows her subject must realize the importance of relative values. It is characteristic of the novice to fail to see the importance of some parts of the subject matter over other parts. It has been noted that the beginner in teaching history tends to give the same emphasis to an insignificant point as she does to an important point on which all future history hinges. One who knows his subject well must know the relative importance of its parts. To do this she must certainly be much "broader" than any one textbook. She must study and read widely. She should be a constant reader of some of the best journals in her field. She should possess the same attitude that prompts accumulation of money or any other thing. In addition to an avidity for reading more of his subject, anyone who would be a scholar in his field must develop a technique for collecting and filing material in a way that makes it available when needed. A convenient and helpful method of collecting and filing useful information is by using cards 5 inches by 8 inches in size. A system of filing either by author or subject can soon be developed whereby constant use will be made of the materials collected.

Skill in teaching. To assure the acquisition of skill in teaching, thorough professional training is demanded. It is generally conceded by men directing education today that professional training is essential to successful teaching. It is fully as important that a teacher understand the thinking of a child as that she have knowledge of the subject to be taught. Since the laws of learning have been discussed elsewhere in this text it will not be necessary to mention them here. It should be constantly kept in mind, however, that no teacher can be effective in her work unless she understands the laws of learning and unless she understands the levels of thinking of the children to be taught.

One of the common causes of failure in teaching, as is evidenced by the list of the causes of failure on page 35 of this text, is poor methods. Poor methods are nearly always the result of a failure to understand the laws of learning, a failure to under-

stand how children think, a failure to understand child nature, and a failure to organize subject matter in such a way as to make it appeal to children.

Men in administrative positions in public education have long ago accepted professional training as necessary to good teaching. Colleges today are beginning to see the necessity of professional training for college teaching. A knowledge of subject matter is essential but a knowledge of boys and girls and young men and young women is just as necessary if one would have skill in instruction.

Professional interest. Every teacher who is to do well in her profession must have a deep professional interest. There must be an earnest desire to succeed on the part of the individual before she will give her best to her profession. The individual who is using teaching as a stepping stone to medicine, or to any other occupation, rarely succeeds as well as a teacher of the same ability who has consecrated herself to the teaching profession.

Tact. Tact might easily be classed as a personality trait. So essential is it, however, to successful teaching that we have chosen to list it separately in this discussion. The teacher who handles situations and individuals in a tactful manner has many more chances to succeed than the individual who fails to understand and who cannot handle children tactfully.

Recently a teacher in one of the good training schools of America found that one of her first grade children was not doing well. Further study of the child led her to believe that he would do better in the kindergarten. He was not keeping up with the class in any of its work and because he could not keep up with the class he was constantly doing things to attract attention to himself and interfere with the program of the room. This teacher went to the kindergarten teacher in the same school, told her the difficulty and told her that she believed the child would do better work in the kindergarten. The teacher then went to the child and told him that the kindergarten was greatly in need of a boy about his size who would come into the group and take

certain major rôles in leadership in certain types of activities. She told him that the kindergarten was seriously handicapped by the lack of a boy of just his type and ability who could do the things they needed to have done. The kindergarten teacher then went to the first grade and asked the boy if he would be willing to come over into the kindergarten room and take charge of certain types of activities for which they needed him. The boy was made to feel that the success of the kindergarten in that school was dependent upon his going into the room to assume certain leadership positions. There was no intimation of a demotion from the first grade to the kindergarten. The boy went to the kindergarten happily and his work improved steadily. This is an excellent example of tact on the part of both teachers involved.

Situations can in most instances, if rightly handled, be made to contribute to the child's self-respect. Tact can often keep him from feeling inferior to the group. It frequently saves personalities. The problem of the teacher is to build self-assurance and confidence in the child so that he can go on with his work and handle situations as a normal individual should handle them.

Sympathetic understanding of children. The next point to be discussed in this chapter is the sympathetic understanding of children. No teacher can succeed in the elementary or high school who does not love boys and girls. There must be love of children and a sympathetic understanding of children. Any teacher who would succeed in her profession must see the possibilities of building character in children. To her each child must present an opportunity and a challenge.

Superior teachers needed. If children are to be well taught in our country men and women of superior gifts must be attracted to the field of teaching. It is not possible to make a superior teacher out of a person of mediocre ability. Young men and young women of ability must be enlisted in the profession if it is to serve in the best way. They must be students always, seeking knowledge, inspiration, and enthusiasm wherever they may be found. They must be champions of childhood, champions of education, and champions of all that means growth and

power for good. Henry C. Morrison in his book on *The Practice of Teaching in the Secondary School* says that it is an unhappy individual indeed who cannot look back to the lasting influence of at least one good teacher. If teacher training institutions work out their programs properly in the future it should be an unhappy individual who cannot look back to the lasting influence of all of his teachers. While men and women today in looking back over their school-day experiences probably cannot pick out more than one or two outstanding teachers, or perhaps five at the most, the time should come when every individual can look back and say "They were all good teachers and they have all contributed to my well-being."

QUESTIONS AND EXERCISES

1. What information about a teacher should a superintendent have before tendering her an appointment?
2. Can you recall any cases of disloyalty among teachers you have known? What were the results of such disloyalty?
3. Other than academic and professional qualifications, what qualities do you think a teacher should have?
4. How do you account for the apparent low esteem with which education was held by the early colonists?
5. What is the difference between a profession and an occupation? Why do we speak of teaching as a profession?
6. Take the twenty-five traits of teachers as listed in the table on page 33 and rank them in the order of their importance, as you see them.
7. List the traits or characteristics that in your opinion make up personality. How many of them are subject to training?
8. To what extent do you believe teachers are born rather than made?
9. Make suggestions as to how a freshman in a university or a teachers college might start an up-to-date filing system of materials read and studied. What are the arguments for and against taking notes on cards rather than in a loose-leaf notebook?
10. Can you recall any instances wherein a lack of tact caused a teacher trouble?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER III

THE TEACHER AND THE COMMUNITY

Much has been written in recent years about the relation of the teacher to the community. Practically all of the material that has appeared in print has been written primarily with the rural community in mind. There are many problems concerning the relationship of the teacher to the community but they do not all concern themselves with rural conditions. What may the community rightfully expect of the teacher? What may the teacher have a right to expect of the community in which she teaches? In making a study of the relation of the teacher to the community it would seem well to review the changing American community before discussing to any considerable extent the relation that might be expected to exist between the teacher and the community.

The Changing American Community. In 1700 there was not a city in the United States with a population of 8,000 or more inhabitants. Ten years later there was only one city of 8,000 or more people, and it had a population of 9,000. In 1900 there were 545 such cities, with a total population of 24,992,199, or 32.9 per cent of the entire population of the nation. The following information concerning the population of the United States as given in the United States census reports will be of interest to the readers of this volume.

TABLE 3
POPULATION TRENDS OF THE UNITED STATES, 1880 TO 1930

YEAR	TOTAL POPULATION	URBAN POPULATION	RURAL POPULATION	PER CENT URBAN	PER CENT RURAL
1880	50,155,783	14,772,438	35,383,345	29.5	70.5
1890	62,947,714	22,720,223	40,227,491	36.1	63.9
1900	75,994,575	30,380,433	45,614,142	40.0	60.0
1910	91,972,266	42,166,120	49,806,146	45.8	54.2
1920	105,710,620	54,304,603	51,406,017	51.4	48.6
1930	122,698,190	68,954,823	53,743,367	56.2	43.8

It is easily seen from the data presented in Table 3 that the nation is rapidly becoming urban. Some states, particularly the eastern industrial states, are becoming urbanized more rapidly than the southern and the western states. Villages have become cities in short periods of time. Los Angeles was a rural village of 1,600 people in 1850. The census of 1930 gives Los Angeles a population of 1,233,561. It is the fifth city in size in the nation. Detroit, an unimportant city at the close of the last century, is today the fourth city in manufacture and in population in the United States. One industry, the manufacture of automobiles, has been responsible in large measure for Detroit's growth. Numerous cities have grown up in a decade on the plains of Texas since oil was discovered there. Communities change rapidly, and from all indications the United States will constantly become more urbanized.

There are many factors that have contributed to the changes that have taken place in American communities. It will not be possible to discuss all of them, but we shall discuss a number of them that have been instrumental in bringing about new conditions in America.

Transportation. One of the first factors that greatly influenced our community life was the change in methods of transportation. During the past century we have advanced from an ox cart to an airplane age. Railroads were unknown in America before 1827. Today there are 251,000 miles of railroads in the United States, linking up communities over the entire nation. The automobile, invented in the early 90's, did not come into wide use until after 1910. There were fewer than 4,000 passenger cars in use in the United States before 1900, we are told. There are said to be in use in the United States today approximately 24,000,000 passenger cars, or one for every five persons. The automobile and good roads have made possible a large amount of touring on the part of the American people. Tourists are learners. They get new ideas from the communities they visit. They carry these ideas home with them, put them into practice in their communities, and as a conse-

quence of tourist travel, we have rapidly changing American communities.

The airplane is the newest method of travel in America. It has already achieved large success in the transportation of air mail, and has become an important factor in carrying passengers in the United States. A hundred years ago it required as much as six months to go from the Atlantic to the Pacific coast. Today the trip may be made in less than fifteen hours by airplane.

Communication. New methods of communication have done much to bind communities together and to make for a happier community life in America. In the pioneer days of America when settlements were few and far between, and when the only means of communication between settlements was through "runners" or stagecoach lines, communication was slow and difficult. The railroads have done much in the past century to speed up communication. Fast trains have increased the speed of mail delivery between points and have brought cities, states, and communities closer together.

Probably no one factor has been more helpful in eliminating the isolation of the rural communities than the telephone. Invented in 1876, and scarcely used at all in rural America prior to 1900, it has in the past thirty years penetrated the most remote sections of our mountains, our deserts, and our plains, and has made communication possible with almost every hamlet in the land. Even the isolated rancher on our western plains has found it possible to link himself up with the world by the use of the telephone. Service over telephone lines has become remarkably satisfactory, and there are in the nation today approximately twenty million telephones in homes and in business houses, serving the social and the business life of the nation.

Another agency for remaking community life in America has been rural free delivery of mail. The United States government has not found it possible to provide rural free delivery for the whole nation, but it has gone a long way toward providing daily

mail for the majority of its population. Daily mail delivery makes it possible to receive a daily paper, magazines, and other reading matter in one's own home.

These are just a few of the types of communication that have been helpful in knitting America closer together and in changing the ideals and standards of community life in order to bring about more nearly uniform attitudes, standards, and ideals for our civilization.

The press. One of the powerful factors in influencing thought and action in any country is the press. In the United States the daily circulation of newspapers is above thirty million, and several periodicals publish more than a million copies at each issue. Magazines reach millions of homes in this country. The press is a potent agency for molding public opinion. Public opinion controls community action. The press, therefore, is an agency for good or for evil in any land at any time. Fortunately, the press as a whole is an unselfish organization, committed to the honest, intelligent development of our nation. There are papers and there are magazines that probably do not contribute to the public welfare but the press as a whole is committed to the public good.

The moving picture. The moving picture is relatively a new agency in the education of the world. It is hardly more than a quarter of a century old commercially, but in that time it has become one of the important agencies for influencing public attitudes and public morals. At the present time millions of dollars are being spent in the preparation of films that will entertain and amuse, and millions more for educational films that will be helpful in building the attitudes, ideals, and standards needed in American civilization. The moving picture will always be a factor in changing our habits of thinking and acting.

The talking picture which has more recently come into existence is just an extended influence of the silent film. Both of these agencies may be important in building good community life or both may wield destructive influences in American civilization. Boards of censors have been provided in practically all states

of the Union to pass upon the type of film to be presented to the youth of our nation. As boards of censors do their work on a higher plane and as the producers of the film have a more clearly defined program for the good of America, we may safely look to the theater as a means of help in molding community thought and action.

Radio. The most recent educational influence that has come into American life is the radio. It has been in use in America on a commercial basis little more than a decade, but in that time it has become one of the chief factors for molding public opinion. It is said that there were more than fifteen million radios in the United States in 1930 and that more than sixty million people listen in on radio programs every day of the year. The influence of the radio may be understood more clearly when one sees the amount of money being spent by large corporations in advertising their products on the air. It is said that Pepsodent's sales have grown enormously since the Amos and Andy program was initiated to advertise their products. General Motors, the General Electric Company, and a number of other large corporations are using the radio to stimulate sales. The Red Cross, political parties, and other organizations and institutions find the radio helpful in promoting their programs. The radio is finding a place in the public schools today and is being used for educational purposes in institutions of learning all over the country.

Television. Television is the newest of these inventions to be offered to America. While it has not yet found a large place in our program it is safe to predict that the next decade will see a wide use of television.

The public school. If one were to add the influences of transportation, communication, the press, the theater, the radio, and television, it is probable that all of these combined would not equal the influence of the public school in its effect on community development in America. This may seem like an extravagant statement, but when one realizes that the influence of the press would be wholly negligible but for the ability of the general

public to read, it is easily seen that the influence of the press is dependent upon the ability of the public school to teach boys and girls to read intelligently and well.

Whether or not some of the agencies discussed wield a helpful or harmful influence depends in part upon the individual's power of discrimination. Unless the public school teaches boys and girls to discriminate carefully, to choose between right and wrong; and unless it teaches them honesty, sincerity, and all of the qualities that make for successful living, the nation-wide influences for good will be greatly weakened. It becomes imperative, therefore, that the public school shall do its work well. If the public school is to do its work well, the public school teacher must do her work well, for the work of the teacher, after all, determines the value of the work of the school. The relation of the teacher to the community, therefore, becomes a vital problem in American education.

Social Needs Vary. In any discussion of the relationship of the teacher to the community it must not be forgotten that social needs vary widely in different communities. Not only do living conditions vary, but the problems facing individuals and groups in the same community differ. More and more there is a tendency for people who have approximately the same standards of living, the same ideals, and the same attitudes, to gather together in a community. "Like seeks like" and communities are becoming in many respects more homogeneous than they were formerly, but there are still wide differences in individuals within the same communities.

Even in a small city of sixty thousand people, the communities will differ almost as much as in some of the larger cities. Kindergarten education in a school attended only by the children of the wealthier white citizens will differ from that in a district where only little negro children are in attendance. In the same way there will be different types of problems for grades and for high schools as the children of communities vary in their social and civic background and experiences. Teachers should be keenly sensitive to the social needs of the community in which

they work. They must know and understand the background of the children in these communities before they can do effective teaching.

Bringing Home and School Closer Together. A great deal has been written about the importance of bringing the school and the home into closer contact. There has always been too wide a gap between home and school. Bridging the gap between home and school has been discussed time and again within recent years, but the gap has not yet been bridged. The larger use of the school plant and the larger interest of the teacher in community welfare have been instrumental in bringing the school into closer relationship with the community. But the relations between the school and the community, or between the teacher and the community, will never be satisfactory until parents have been properly taught and until they fully appreciate the work of the school and the work of the teacher. It is reasonable to assume that the teacher will be a more effective agent for good in the community if she knows her community well and knows the needs of the people who make up her constituency. The community must have faith in the teacher and the teacher must believe in her community. The contact between the teacher and the community must always be a happy one if progress is to be made. It is important that the teacher should always make a good impression in public and that she leave people happy in every contact that she makes.

It is easier for the teacher to establish proper relationships with the community if the community has made adequate contacts with the school. It is not easy for a teacher to do her best work in a community that does not have some form of activity or a series of activities to bring its members together so that they can plan and work for the ultimate good of each other. Where such a relationship does not exist, perhaps the best thing the teacher can do in the early part of her program is to assist in the organization of those activities that will mean more wholesome relationship and a better development of community spirit and community morale. It is an unusual community that

does not have some form of parent-teacher organization which may be used as a vehicle for bringing the community closer together. Unfortunately the parent-teacher associations in America are made up too largely of mothers with far too small a representation of fathers. Because of this fact, fathers' clubs have been organized in many communities with the idea of bringing the father in closer contact with the school life of his child, and in closer contact with the work of the school in general.

In discussing the question, "Why must the school keep in close sociological touch with the life of the community?" Chapman and Counts say:

If we assume that the activities of the school, whether of the simpler or the more complex type, should center about the great human interests, there remains the difficult question: Since it is quite impossible to include them all, what particular activities should be selected? The school must not attempt what is already well done by some other agency. The social deficiencies of a people must therefore be discovered, and activities must be introduced into the elementary school accordingly. This means that in a changing society, conscious of its own needs, the curriculum will be undergoing continual and intelligently directed change. For the purpose of discovering its educational needs, the progressive community will conduct a perpetual survey of its activities. The school will thus become the agency through which the practices of a people are gradually purified and adapted to the needs of the world. According to this conception of elementary education the common school is the institution through which the best intelligence of society may operate to insure the most satisfactory adjustment to the basic conditions of life.¹

Dealing with Parents. One important relation between the teacher and the community arises when parents ask about their children's work in school. Teachers frequently have a tendency to report more favorably on the progress being made by the children than the children's work justifies. A parent should always be told the truth concerning the progress of his child. John A. Cone in *A Superintendent's Suggestions to Teachers* says that sooner or later the parent must learn the truth. When

¹ Chapman, J. Crosby, and Counts, George S., *Principles of Education*, Houghton Mifflin Company, 1924, page 425.

questioned by parents concerning their children, therefore, Mr. Cone suggests that every good school administrator will advise the teacher always to tell the truth.

One of America's foremost men in public school administration once said to a group of students who were working in the field of elementary education that there was no place where a parent received less justice than at a public school. The superintendents and principals are supposed to champion the cause of the teacher when any person raises a question concerning the work of the school. If morale is to be maintained it is necessary that the administrative officer shall believe in the work of the teachers and shall stand by them in difficulties. It is true, however, that a parent too seldom gets justice when appealing to the school on any question where his child is concerned. This problem can be worked out in such a way that morale will not be lost, that parents will always be satisfied, and that children will be better taught. If this is to be done, however, accurate measurement of progress must be made. Educational measurements must be so objective that the teacher can show the parents the progress that the child is making and can satisfy the parents on all points concerning the child's work in the school. If teachers are always honest with parents, parents will soon understand and believe in the program.

Community Must Appreciate Scientific Methods. Occasionally a teacher has not been successful because her methods were so new to the community, and so little understood and appreciated that a barrier developed between the teacher and the parents. She may have been a superior teacher and her work might have been highly successful in a more progressive community, but if the parents did not understand and approve, her work in the school could not succeed.

Dr. Charles H. Judd in his *Introduction to the Scientific Study of Education* says that, "if schools are to be progressive and efficient, they must be studied very much more broadly and comprehensively than they can be from the pupil's point of view. The suggestion naturally arises that this broader study

is a part of the professional duty of the teacher. So it is; but it will not be enough merely to exhibit the intricacies of education to teachers. The whole community must be shown by scientific methods that the school is a complex social institution, and that its conduct, like the conduct of every other social institution, requires constant study and expert supervision. In this movement of opening the eyes of the community to the needs and nature of education, the school officers must be leaders; but their methods must be impersonal and exact.”¹

In discussing this problem further Dr. Judd says, “Although the community as a whole recognizes the need of education, and is willing to supply the necessary financial support, it cannot manage directly the details of school operation. The community cannot decide what seven-year-old children shall study. The community cannot decide what ought to be done with a disorderly pupil. It becomes necessary, therefore, for the community to devise some method of picking out suitable representatives who can carry on the schools.

“The first task to be thus delegated was that of classroom instruction. One reads in the records of the early town meetings of New England how the whole community participated in the discussion of all financial matters and of many problems connected with the course of study. For example, the site of a schoolhouse, its cost, and its plan have always been subjects of community discussion. Again, the community has often decided whether it wants geography taught or certain branches of mathematics. But when it came to the daily routine of school work, the community employed a teacher and turned the children over to him.”²

What One School Did to Close the Gap. What may teachers do to bring their schools and communities into a closer and more helpful relationship? A group of progressive young teachers in one of the excellent schools of America recently undertook to

¹ Judd, Charles H., *Introduction to the Scientific Study of Education*, Ginn and Company, 1918, page 3.

² *Ibid.*, page 63.

establish a relationship between the school and the people served in the school that would be permanent and that would be helpful. Each teacher in this school invited the mothers of the children in her grade to come to the school once every two weeks to talk over the problems of the children in the grade and to discuss some problems of teaching in the home and in the school, so that the teacher and the mothers might have in mind the same goals in habit formation and in establishing proper attitudes and ideals toward life and work. These mothers came. They talked about their children. They talked about the program that was being made, always helpfully, always with just one end in view—the building of better citizenship habits on the part of their children. These teachers have in mind a greater community program for the children. Working in coöperation with the mothers, they are attempting to build life habits of the kind that will make a useful citizen of every child taught. The mothers entered into the whole program with a fine spirit and they are working coöperatively with the teachers for the good of their children.

Hundreds of communities in the past ten years decided that one of the fine things that could be done to build a better community relationship and better community understanding was the establishment of courses in child care. Usually in such courses a member of the faculty of the school gave a series of lessons in child care and training so that mothers might better understand the problem of the early education of their children. The natural result of such courses is the formation of better habits on the part of children before they enter school. These courses have attracted widespread interest and have done much toward bringing into the school children who can be better taught from the first day of school onward.

To What Extent Shall Teachers Participate in Community Activities? This question cannot be answered for all teachers and for all communities. Perhaps the best answer that can be given here is this: "It will depend." Some teachers have more leadership ability than others and can assume larger respon-

sibilities. Some communities demand more of the teacher's time outside of school than others and if she is to succeed she must meet the demands of her patrons. There is considerable difference of opinion today as to the types of community activities in which a teacher should engage and the amount of time that a teacher can afford to give to them. Warren Nevin Drum in *A Preview of Teaching* says: "Taking part in community activities that have no direct relation to school work, such as the community chorus, community dramatics, the Grange, the church school, or the church choir, acting as guardian of a group of Camp Fire Girls or as scout master of a troop of Boy Scouts, and the like, is regarded as evidence of interest in something more than salary and is appreciated accordingly. Ultimately that appreciation is reflected in the teacher's salary. Be it known that salary increases often come as much through community appraisal of the teacher's worth as through that of the principal or superintendent, and with the confidence and support of the community her tenure gains added security."¹

Certainly the teacher should give of her time and energy in developing community spirit and morale and in building a better foundation for citizenship by participating in as many worthy community activities as possible. But she must not forget that her first task is one of good teaching. Any teacher who uses all of her hours outside of school and a large amount of her energy in taking part in community programs will probably not do effective teaching.

The alert and conscientious teacher is always eager to serve in the most helpful way. She wants to make the best contacts with her children out of school. She must know them in their homes, in their play, and at work, as well as in school if she is to help them most in the formation of those habits that make for good citizenship. The promotion of democratic ideals is a feature of life both in school and in the world at large. "Only through actual participation in the life about them which has become so

¹ Drum, Warren Nevin, *A Preview of Teaching*, Ginn and Company, 1928, page 160.

universal that it has no boundaries, can the girls and boys in our schools today learn to do the work which will be theirs in later years. What of 'higher life' and political ideals can be taught without contact? How can each individual gain power for leadership unless opportunities for leadership are offered? The printed page and the laboratory experiment are valuable today only as they serve as a means of solving problems which are interesting because they are a part of the great life purpose of the universe." ¹

Without question the teacher is the link between the home and the school. Her influence on the lives of the children should extend far beyond the four walls of the room in which she teaches. She should be deeply concerned with the conduct of children out of school. But it is impossible for a teacher to follow the activities of any considerable number of children after they leave the school. Her best assurance that these children will conduct themselves properly when away from the school is that they conduct themselves properly in school.

Sheldon Emmor Davis in *The Technique of Teaching* says, "We now believe that citizenship depends upon training as much as upon understanding. The best guarantee that a pupil will be the right kind of a citizen is the fact that he occupies with credit his place in the microcosm of society we call the school. The duties of citizenship are those of the Ten Commandments and the cardinal virtues, defined and practiced in relation to present problems. Theodore Roosevelt once said, 'The average citizen must be a good citizen if our republics are to succeed. The stream will not permanently rise higher than its main source of national power, and national greatness is found in the average citizenship of the nation.' " ²

Dr. Davis, in commenting further on this problem, makes the following statement, "The development of adequate habits

¹ Cooley, Anna M., Winchell, Cora M., Spohr, Wilhelmina H., and Marshall, Josephine A., *Teaching Home Economics*, The Macmillan Company, 1919, page 359.

² Davis, Sheldon Emmor, *The Technique of Teaching*, The Macmillan Company, 1922, page 294.

and ideals of citizenship depends upon three phases of school activity: participation in the conduct of the school itself, coming into relationship with the community of which the school is part, and receiving systematic instruction in the principles and organization of government. All of these are present throughout the pupil's school experience."¹

Where Shall the Teacher Live? Early writers on the relationship of the teacher to the community insisted that it was necessary for the teacher to live in the community in order to contribute most to the welfare of the educational program and the social program of the community. All of these writers evidently had in mind rural America. It is hardly possible that any writer on the relationship of the teacher to the community would insist that because a teacher was teaching on the north side of the city of Columbus she should live in the school district in which she was teaching, or because she was teaching on the south side of Chicago that she should necessarily live there. Hundreds of writers have lamented the fact that the teachers leave the community on Friday afternoon and do not return until school reopens on Monday. Hundreds more have lamented the fact that the teachers leave the school and the community at the close of school every day and do not return until school reopens the following morning.

They seem to forget that community life in America is rapidly changing. They forget, too, that in many communities there may not be a desirable home where a teacher can board during the time she is teaching. Moreover, they forget that if any teacher is to do her best work she must be happy in her home relations. There are thousands of communities in America where a teacher may not find a desirable place to live during the school term. It is far better, therefore, for the teacher to live outside of the community and have a happy home life, and come to school cheerful the following day than spend the teaching year in the community in which she works, and carry an unhappy disposition into the schoolroom.

¹ *Ibid.*, page 294.

It is as easy for a teacher to travel twenty miles on hard-surfaced roads today as it was to travel two miles a decade or two decades ago. Pupils travel long distances just as easily, and it is not uncommon in America for children to travel from five to ten miles to a consolidated school. All of this means that communities are growing larger, that community contacts are wider, and the teacher's relationship to the community is constantly changing. The schoolhouse that was once isolated is no longer remote from civilization due to the fact that good roads have brought it within a half hour's travel rather than a half day's travel from a larger center of civilization.

The Employment of Local Teachers. For the past fifty years the employment of local young men and young women as teachers has called forth serious criticism. Sometimes these local teachers were relatives of board members. Nepotism has been condemned by men and women in education all over America. Few investigations have been made, however, to determine whether or not the local teacher has done as well as some other teacher who might have been employed. It is possible that there may be two sides to this question.

Living conditions in rural communities are so frequently undesirable to anybody except a local person that it has been in the past almost impossible to get well qualified teachers to go into certain rural communities where living conditions were poor and where travel was difficult. Perhaps the best person available for hundreds of rural communities in America was a local boy or girl who had gone away to school and had prepared himself to teach in his own community. It is possible that this young man or young woman knew the people in the community better than any other teacher ever would have known them, and he may have done his work on a higher plane than any teacher who could have been induced to live and teach there. Too much inbreeding is bad for any school system and it is to be understood here that the authors are not making a plea for the employment of local people. There is nothing that broadens a teacher more than contacts with new school systems and, generally speaking, it is

not a good policy for any board of education to employ too large a number of local people. Conditions sometimes make it absolutely necessary to hire a local teacher but in all such cases merit alone ought to be the deciding factor. Personal relationships and "local pull" should have no weight in the matter.

Moral Problems. The question of the teacher's conduct in the community has always been and always will be a problem that cannot be overlooked either by the teacher, by the community, or by the board. Whether a teacher shall play bridge, whether a teacher shall dance, whether a teacher shall have "dates" and whether a teacher shall engage in other types of social and recreational activities will depend in large measure upon the ideals and standards of life in the community. No one will question the right of the teacher to a large amount of freedom in her own life program. If, however, cards and dancing are not considered proper by the community it is hardly fair for the teacher to engage in these activities when she knows that she is doing something that will lessen her influence for good in the community. The teacher cannot hope to wield the best influence on the lives of the boys and girls unless her program of life has the approval of parents in the community. Occasionally a teacher so far forgets herself as to make "dates" with the young men in her school. This always weakens a teacher's standing in the community. Any teacher, if she would be most helpful and do her best work, must always live so as to merit the social approval of the children in her school and of the parents in her community. It is only fair that the teacher shall deny herself some things that may seem to her to be harmless, if by so doing she will strengthen her position for good in the community.

Religious Relations. There are certain problems that school boards feel they must take into consideration in the employment of a teacher in some communities that would not be problems in other communities. In a small town where the religious denominations are fairly well distributed between four or five of the leading denominations the school board frequently feels that it is necessary to employ teachers who represent the

denominations in the community. If, for instance, the Baptists, Methodists, Presbyterians, and Disciples are about equally well represented in numbers in the community and all have churches they are supporting, a school board sometimes attempts to employ teachers who will represent all of these faiths. If the board attempted to employ only Baptists there would be serious criticism from the other denominations. The reason for this is obvious. Each church desires educational leadership for its young people in their religious life. The teacher is frequently called upon to teach in the Sunday school and to assume some part in the life of the young people's organization in the church.

Religious prejudice was at one time a factor in the employment of teachers in a community, and in the relation of teachers to the community. It is still too prominent a factor in some localities. It is probable that the time will soon come when the teacher's denominational affiliation will have very little to do with the teacher's employment or with the relation of the teacher to the community. As we become more tolerant in our religious views and as we become more interested in a broader, richer, and deeper religious life rather than in the more narrow sectarian point of view, undoubtedly denominational affiliation will have less and less to do with success in teaching and with the teacher's relation to the community in which she lives and works.

Tenure and Community Contacts. What contacts may a teacher be expected to make with her community? Again the answer must be: "It will depend." Some communities require that a new teacher visit the home of every child she is to teach. This is expensive in time, in money, and in the teacher's energy. It frequently necessitates giving up a portion of the vacation she needs if she is to come to work with the freshness and vigor that she should have. It costs her money to come to her school early and visit the homes. No one will question the desirability of the teacher's knowing her community. It will be better, however, if the community can learn the desirability of keeping

the successful teacher in the same position over a period of years. Long tenure will eliminate the necessity of constantly getting acquainted with new communities.

Unfortunately, some school boards feel that it is not a good policy to keep a teacher in the same position too long. Other boards of education cannot make the position attractive enough from the standpoint of salary for the growing teacher. Teachers leave the profession for one reason or another. These and other factors make for a heavy teacher-turnover. The total time devoted to the teaching profession by the median teacher in the United States is about six years. There is no information available about the number of different communities in which she teaches during her professional life, but it is safe to assume that they are too many for the most effective teaching. Longer tenure will undoubtedly contribute to the proper types of contacts and relationships between the teacher and the community.

QUESTIONS AND EXERCISES

1. What effect has the rapid urban migration had upon the mental level of the remaining rural population?
2. Take some present-day community that you know well and compare its methods of transportation with the methods which that same community used in 1850.
3. Make a list of the values that will probably accrue to education by the use of the radio.
4. What suggestions can you give for making our immigrants more nearly Americanized than most of them are now?
5. What do you think are the causes of America's being the "most lawless civilized nation on the face of the earth"?
6. To what extent does a parent fail to get justice when appealing to school authorities?
7. Do you believe teachers should strive to be social leaders in their school communities?
8. Under what conditions would a school board be justified in selecting a teacher who is a relative of one of the school board members?
9. Would you favor a permanent tenure law for teachers who had been in the same position for five years or longer? Why?
10. How should the teacher spend her time after school hours? During the week-end?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

PART II
THE TEACHING PROCESS

CHAPTER IV

SCHOOLROOM ECONOMY

In a certain small town there was an old man who owned a shoe store. This store was in an old, dilapidated building along a side street. The building had but one door in front. The first floor of the building was approximately three feet above the ground, with no step leading up to the door. This made it impossible for customers to enter the store. A small stool was placed on the sidewalk at the side of the shoe store where customers were supposed to sit and try on the shoes they wished to buy. If by chance one were able to look into this store he would find, not boxes of shoes placed in neat rows after the customary manner, but instead one big pile of shoes all emptied out of their boxes. Consequently, when a customer wanted to buy a pair of shoes, the salesman hunted through the pile for a shoe of about the description the customer gave, then asked the customer to try this shoe on outside of the building. If perchance the customer found a shoe that he wanted, it was then the salesman's job to search for another shoe that would match it. It was claimed on good authority that the owner of this shoe store bought shoes of high quality and sold them much cheaper than they could be bought anywhere else in town. In spite of this fact, however, he had little business. Men and women did not approve of his way of handling sales. He failed to keep up in business methods. His scheme of things was not in line with modern progress. Thus he failed to get the business because he did not conduct his business in a business-like way. Successful business men have learned long ago that system and organization are essential for a thriving enterprise. They have their organization so carefully planned that all wastes have been eliminated so far as possible.

Now, just as this merchant lost business and failed to hold his customers because he had no carefully systematized plan, so will the teacher lose the interest of the children and the best wishes of the school officials and parents unless she, too, manifests a business-like appearance in her schoolroom organization. System and organization, when rightfully used, prevent waste. The teacher should be careful, of course, to make system and organization a means to an end rather than the end itself. A principal in a school in a small town was so anxious to have the line of march of the pupils perfected that instead of making it a means to an end, it became an end in itself. Throughout the community this school was noted for its perfect system of marching. Every pupil in a school of four or five hundred arose at exactly the same time when the signal was given. Each pupil kept step precisely with the music and all lined up exactly in accordance with the plans. The march in that school was a beautiful sight. No pupil was out of order, no pupil was out of step, no pupil cut across lines. Parents came and visited the school and congratulated the principal on the beauty of the line of march. It is not a question for discussion here as to whether children should march in and out of school. The difficulty in this situation was that the principal made it the end rather than the means. Instead of making the march contribute to good order and high grade work in other ways, it was the end to which everything else contributed.

This leads one to a consideration of the objectives of an organized schoolroom.

Objectives of Schoolroom Organization.—*To secure a maximum of productive work from each member of the school.* Naturally, when pupils are getting in each other's way and wasting each other's time and energy there cannot be a maximum production of work. It is not uncommon to find a teacher using a system or plan of schoolroom organization that wastes not only her own time, but that of her pupils. For example, it would not be difficult to find a teacher who distributes examination papers to classes of thirty or forty pupils in such a way that much time is

wasted. A common procedure is for the teacher to get up before the class with the thirty or forty papers to be distributed, and as she calls the name of the pupil, walk individually to each pupil and hand him his paper. Teachers have been known, where pupils are not seated in alphabetical order, to make twenty-five or thirty trips across the room, and thus spend a considerable part of the recitation time in the distribution of one set of papers. This, of course, is not contributing to the maximum productive work of each member of the class.

It is not uncommon also to find teachers holding up the whole class of thirty-five or forty pupils in order to explain a difficulty to one pupil. If this difficulty is common to all or perhaps a majority of the class it may be justified, but when it is an individual difficulty and the time of the other members of the class is lost, it cannot be justified, and certainly it cannot be claimed that it maximizes the productive work of each member of the class.

When a teacher meets her arithmetic class and asks how many had trouble with a certain problem, and then makes a business of asking the pupil who succeeded in solving the problem to put it on the board for the other members, she is not contributing to the maximum productive work of each member of the class. The pupil who has trouble with the problem is the individual who should put it on the board and thus learn his errors, but when the pupil who has really worked the problem and understands it well must take his time to place it on the board it is doubtful if he is getting value received.

Again, it will not be difficult for the reader to recall instances of teachers who assigned five or ten words to a class in spelling, without knowing how many of the words could or could not be spelled by different pupils. When a teacher assigns ten words to a class in spelling she may find some child in the class who can spell every word assigned without study. This means, then, that this particular individual really has no spelling assignment, and it is doubtful whether the time he spends on spelling can be justified. If the teacher wants to secure maximum productive work from each member of the school she should see to it that

each pupil has an assignment and, after a reasonable amount of study if he is able to spell all the words in the spelling assignment he should be given other work to do.

The scientists tell us friction utilizes energy by converting it into a form of heat. In the schoolroom the same process holds. Pulling against the brakes in any form is not good schoolroom economy. Friction in the schoolroom may manifest itself in many ways. It may be in the attitude of teacher and pupils toward each other. When the pupils in the schoolroom do not have a wholesome respect for the teacher, do not have confidence in her, and are not anxious to coöperate with her, much energy will be lost. The teacher may find herself losing energy through friction also, because of her attitude toward school officials. For this reason the superintendent of schools and the school board could afford to give much time and thought to having a happy, satisfied worker. A dissatisfied worker causes an unusual amount of wasted energy and lost time.

A few years ago one of the authors spent a week in an industrial plant in Chicago where 1,900 employees were at work. While visiting the plant and talking to the various employees, he noticed that whether he conversed with the lowest paid girl in the box factory or the highest paid worker in the auditor's office, each seemed entirely happy in the capacity in which he served. One reason for this was that everyone realized the part he was contributing to the whole organization. The girl who worked in the box factory felt that her job was the key to the whole production since it was a mailing house and without boxes not a dollar's worth of goods could leave the plant. The highest paid worker in the auditor's office sincerely felt that unless the auditing and accounting were properly taken care of the business of the entire organization would fail. This morale throughout the plant did not just happen. When the manager of the organization was asked how he accounted for the fact that the workers were so extremely happy and felt so surely that they were making an essential contribution to the organization, his reply was, "We do not take any worker in this plant

without first trying him in several different positions. If a worker finds himself unhappy in one position we let him try another, for we realize that a dissatisfied worker is a high-priced individual no matter how cheaply he is hired."

It is to be hoped that the schools will soon realize this and that superintendents and school boards will be willing to do everything within their power to see that the teacher is happy in her work, in this way eliminating or at least lessening the amount of energy wasted through friction.

Another objective of schoolroom organization is the inculcation of proper habits. Much of the schoolroom work is of a routine nature and should so far as possible be made habitual. Children should be taught definite habits in the daily routine affairs. A definite study period, a definite way of placing books in the desk, and definite suggestions for concentration of attention should be habitual factors. Just as a pupil takes his own seat without thinking particularly about which seat he takes, so he should enter into hundreds of other activities at school without having to give conscious attention to them.

A final objective of a carefully organized schoolroom is to carry on the business of the school promptly. It is sometimes as essential to do a thing promptly as to do it at all, which means if a thing is done too late, it might better be left undone. System and organization will inculcate the ideal of promptness. A smooth running organization will insist on teachers and pupils both acting on time. In one school where the periods were supposed to close when the bell rang it was not uncommon for some teachers in the building to hold their classes from three to fifteen minutes over time. This meant, of course, that the teacher to whom the class should report at the next period was prevented from doing the work with the class which she had planned. The teacher who held the class past the regular period interfered not only with the work of the next class, but also with the class that was to occupy the same room in which her class then met. She interfered with the entering of the study hall and broke into the plan and organization of the whole school.

Because this teacher did not realize the importance of promptness she more or less disrupted the whole system.

A teacher or principal who wants to have system and organization in the schoolroom should insist that pupils report at school and class promptly. He should insist that teachers report just as promptly. If it is decided by the principal and the faculty that teachers are to report at the building at 8:15, reporting at 8:16 should not be tolerated. If the time to report is 8:15 and a teacher is considered on time at 8:16, it will not be long before there will be an attempt to count 8:17 as on time, and in a short while probably all teachers will be reporting at 8:30.

The importance of promptness in carrying out the work of an organization must apply not only to teachers and pupils but to janitors, truck drivers, and all others who are interested in the school organization. In consolidated schools it is a common complaint that truck drivers often report too early in order that they may return home and do other work after their trip to school. This should not be permitted, since it is not fair to force the children to leave home earlier than is necessary. Moreover, the tendency here will be just the same as the tendency to arrive late. If the time ruling is once broken the tendency will be to continue breaking it. A teacher will be amply rewarded in insisting on promptness if she wishes a good school organization.

Children should bring up their work promptly. The teacher should grade papers and hand them back promptly. The teacher should close the period promptly and in general instill the whole idea of promptness throughout the working corps.

Necessary Qualifications of Teachers for Classroom Economy.

The teacher who wants the classroom organized so that maximum productive work will be accomplished, friction avoided, right habits inculcated, and the business of the school conducted promptly, must possess certain qualities. While the qualities that would contribute to this type of organization are many, it is probable that the following three will be very suggestive of the traits a teacher should possess.

The teacher should understand human nature. Her whole work is with human individuals. She must be able to lead people to believe in her scheme of things. She must, in other words, sell her program to her pupils, to the parents and to other workers in the organization. An individual who understands human nature must be tactful. Tact may be defined in many ways; however, one may be said to be tactful who can see and understand the other person's point of view and is able to get him to see his. The tactful individual is able to get the other fellow to do what he should with the belief that he is doing what he wants to do. For example, a mother gave her little son two pieces of cake, one a large piece and the other a small piece, with the request that he give one of the pieces to his sister. The boy knew from past training that courtesy demanded that he offer his sister a choice of pieces, but he had reason to believe from past experience that she would take the large piece. Therefore, before offering his sister any cake he cut the small piece in two parts and then asked his sister which she would rather have, one piece of cake or two. Her reply was that she would rather have two pieces. He therefore gave her the two pieces and kept the large piece himself. By this means, he not only gave his sister what he thought she ought to have, but in so doing gave her what she thought she wanted. This may be called tact.

A teacher who understands human nature must be tolerant. Tolerance is a word that is often heard but usually difficult to put into practice. The psychologist has shown that oftentimes in the schoolroom a little child whom the teacher can hardly tolerate possesses certain traits which the teacher may at one time have possessed herself and which she had a hard time overcoming. It is nerve-racking for her to see these same traits flaunted in her face by some other individual who possesses them. If this is true it would appear to be good advice for the teacher, when she finds an individual in the schoolroom whom she cannot tolerate, to analyze her own traits and qualities and see to what extent the individual is a reflection of herself. The average teacher finds it much easier to tolerate a pupil who always thinks

of her welfare, who is constantly bringing her flowers or apples or some type of reward for her services, than to tolerate the individual who does not, although the latter may come from a home where it is a physical impossibility for him to reward the teacher in similar ways. A lack of tolerance is almost always a manifestation of ignorance and narrow-mindedness. If one finds himself intolerant of another person's religion or political views, there is no better remedy than to read widely and get a good understanding of the other person's doctrine. Isolation, narrow-mindedness, a lack of vision are all contributory to intolerance. Such qualities do not make for leadership, because they prevent one from having a full understanding of human nature.

A teacher who would understand human nature must also be patient. Many individuals think slowly, act slowly, and are hard to convince. One who understands human nature knows this is true and will not expect quick results when other people must be convinced and led. Therefore, the teacher should inculcate in herself the ideals of patience, sympathy, and kindness, for through such traits only can she hope to lead others.

A second quality that a teacher should have in order to bring about classroom economy is imagination—the ability to visualize. It is claimed that certain races are weak in the power to visualize. They are not good planners and are not likely to be leaders in erecting new cities in isolated spots. Some teachers are like that. They cannot see business where there is none. They would never be sought as advertisers and if they owned a business they would not be heavy contributors to the advertising field. Imagination is the ability to foresee or work out in the mind's eye plans and schemes. Just as the artist who paints has a complete picture of the painting before he starts, so must the teacher be able to visualize plans and schemes before she is ready to begin the work. Imagination is a quality that ought to be developed in individuals. Children should be taught to give expression to their imaginations within limits. Too often teachers have crushed out of pupils the tendency to draw upon their

imaginations. Failure to take the imagination of the child into consideration often brings dire consequences. For example, here is a boy who in his imagination is one of the prominent players in the big baseball series. He pictures himself as coming to the bat just as the bases are all full and just as thousands upon thousands are breathlessly waiting to see what will happen. In his imagination he hits a home run and releases all the bases. At this time, as the thousands are applauding, the big league manager steps down from the audience and proposes a contract for the next year. Just before the contract is signed the teacher says, "Sixth grade grammar." Is there any wonder that the boy learns to hate rather than to love grammar, especially if he has a teacher who does not realize the importance of the imagination?

The teacher will find that imagination is important in her anticipatory teaching. It is well to anticipate teaching a class, anticipate the questions that will be asked by the teacher, the answers that will be given by the pupils, as well as the questions that will be asked by the pupils. Then the teacher's appearance before a class will give her an opportunity to check her imagination against the actual occurrences, and revise her plans accordingly. So in all her plans and systems of the schoolroom she should visualize, imagine, anticipate outcomes, and then in the light of the knowledge gained, thoroughly revise her practice.

The third quality that the teacher should possess for schoolroom economy is courage and persistence. Plans worked out in imagination will often fail to work out in the concrete. An organization or scheme that seems to be almost perfect will break down in many instances. In such cases the teacher must possess the quality of courage. She must be willing to persist in the face of seeming failure. If one type of plan or organization does not work, another must be brought in that will.

Factors Affecting Schoolroom Economy. It will be the purpose of this chapter to discuss under the following headings the factors affecting schoolroom economy.

The teacher's health. It is doubtful whether the effect of the physical condition of the teacher upon economy in the classroom

has ever been properly estimated. It has often been said that what is true of the teacher is true of the school. If the teacher is in poor physical condition and finds it a drain upon her energy to do the normal amount of schoolroom work, the efficiency of the work will be greatly curtailed.

The teacher's physical health in the schoolroom is dependent upon a number of factors within her control. Among these are the following:

1. A PROPERLY VENTILATED BEDROOM. There is considerable question today as to how bedrooms should be ventilated but among all the methods proposed no one of them fails to stress the importance of fresh air. A teacher who sleeps in a room poorly ventilated will find her vitality the next day greatly reduced, whereas she should get up feeling fully refreshed and anxious to face the day's work.

2. A TEACHER SHOULD TRY TO BUILD UP PHYSICAL STAMINA THROUGH PROPER EATING HABITS. Many teachers, more especially young men, do not know a balanced meal and consequently cannot buy food that will represent the best type of diet. There is no reason today why one should not be able to buy balanced menus, even though the responsibility rests upon the purchaser. Much improvement has been made in the past few years in this respect. For example, in 1790 a country parson made the following entry in his diary: "Nancy was taken very ill this afternoon with a pain within her. I suspect it proceeded in great measure from what she ate at dinner and after. She ate for dinner some boiled beef, rather fat and salty, a great deal of nice roast duck and plenty of boiled pudding. After dinner, by way of dessert, some green-gage plums, some figs, and raspberries and cream. I desired her to drink a good one-half pint of warm rum and water which she did and soon was a little better—and I hope she will be brave tomorrow." No wise parent need or would permit such a diet today. Balanced menus can be secured and if a teacher will rigidly adhere to securing as nearly balanced meals as possible she will find her health greatly improved.

Probably no more important subject could be brought before the teacher than the relationship between proper food and vitality. It has been said that

Methuselah ate what he found on his plate,
And never, as people do now,
Would he note the amount of caloric count—
He ate it because it was chow.

He was not disturbed as at dinner he sat,
Destroying a roast or a pie,
To think it was lacking in glandular fat
Or a couple of vitamins shy.

He cheerfully chewed every species of food,
Untroubled by worries or fears
Lest his health be hurt by some fancy dessert,
And he lived nine hundred years.

The stress of life today is such, and the knowledge of diet has advanced to such an extent that the Methuselah doctrine should no longer prevail with the teacher who wishes to preserve her vitality. Not only should the teacher watch her diet, but she should be careful to drink pure water and plenty of it. It is estimated that, excluding bones, approximately seventy-five per cent of the body is water, and that the average adult should drink at least six full glasses of water daily to keep the necessary water supply in the body.

3. A TEACHER WHO WISHES TO HAVE GOOD HEALTH OUGHT ALSO TO STRESS EXERCISE. Most teachers do not get enough exercise of any kind. One survey showed that the three most violent activities engaged in by teachers were walking, attending a theater, and reading. Even here the number who walked daily compared to the number who attended the theater was very small. For the most part teaching is a sedentary occupation and only by constant watching will the average teacher secure sufficient exercise.

4. ANOTHER FACTOR CLOSELY RELATED TO THE TEACHER'S HEALTH IS SLEEP. Professor Patrick of Iowa stayed awake ninety hours and found at the end of that period that it took

him 1,000 seconds to do as much work as he could do before in 160 seconds. Thus it will be seen that a teacher will materially interfere with her teaching efficiency when she interferes with her regular amount of sleep. Sleep is one of the best rejuvenators of energy. For most people the deepest sleep occurs within an hour or two after falling asleep and gradually grows lighter toward morning. Such individuals would find early rising desirable and that it would interfere less with their efficiency than would late retiring. Other individuals, known as morning sleepers, get their most intense sleep in the morning and their lighter sleep in the evening. It is a well-known fact that sleep is more intense in winter than in summer, and more intense on dark nights than moonlight nights.

A teacher's vitality in the schoolroom is affected by her mental attitude as well as her physical condition. There is, of course, a very close relationship between the physical and the mental life. One who is dejected or gloomy or for any reason has a pessimistic outlook on life will find it vitally affecting her physical make-up. Anger, worry, and fear seriously interfere with the digestive process of most people. These three things,—anger, fear, and worry,—may be looked upon as a three-headed dragon sapping a teacher's vitality. Therefore, if she would have good health and would carry vitality into the schoolroom, she should in every way possible eliminate her worries and her fears and keep a careful control over her temper. An even temper, an optimistic spirit, and a courageous attitude are great contributors to strong physical vitality.

The teacher's mental attitude is vitally affected also by the attitude her pupils manifest toward her. If the pupils love her and respect her and have confidence in her ability, it acts as a tonic to her vitality. Pupils who do not respect her and who do not have confidence in her work are great contributors to a dissatisfied mind. Now, there is no more important law within the schoolroom than the law of sympathetic vibration. If the teacher is sarcastic, manifests suspicion, and acts indifferently toward her pupils, she can expect a like return. When pupils

doubt whether they are getting a fair deal from the teacher, the teacher cannot expect to get a square deal from them. Some pupils were asked whether they had failed because they did not like the teacher, and they replied by saying that they failed because the teacher did not like them. One can guess pretty well the type of teacher these pupils had, and can well imagine that with such an attitude on the part of the pupils the teacher's life was not the most pleasant.

Habit is a vital factor in making schoolroom economy effective. So many of the activities of the schoolroom are daily affairs that the importance of habit in a well-organized plan cannot be over-emphasized. Pupils should cultivate the habit of placing their books in their desks in a certain position, of hanging their wraps on their own hooks, and of collecting their wraps through the use of monitors. It is an easy matter in the schoolroom to assign a definite hook to each individual. Monitors can then be appointed for a week at a time, or longer if the teacher thinks best, to collect the wraps and distribute them to the pupils so that the minimum time is consumed. The methods of noting the temperature of the room and of ventilating the room and of seating the pupils ought to be habitual. The teacher should develop the habit of looking at the thermometer at definite periods of the day in order to check the temperature of the room. It ought to be habitual with her to ventilate the room through open windows and doors at definite times unless the ventilation is taken care of otherwise. She ought to cultivate the habit of checking up on the seats of pupils to see if they are properly adjusted and properly spaced. The teacher should form the habit in the schoolroom of making the maximum use of blackboards. This not only ought to include using the part of the board most easily seen by the pupils, but it should also include keeping the boards clean, and above all, it means erasing misspelled words or anything else on the board which might create wrong impressions in the child's mind.

Supplies ought to be distributed in a way that causes the least confusion and requires the least time. One of the authors

once visited two drawing teachers in different schools on the same day. In one of these schools, when the teacher appeared, not a word was said to the children. The teacher turned to the board and put a free-hand drawing on the board. While she was doing this, two boys quietly arose and distributed the drawing materials with practically no confusion and no questions from the pupils. By the time the teacher had completed her free-hand drawing every pupil had his drawing material ready. Then for the first time the teacher addressed the pupils. In the other room, when the drawing teacher appeared, her first question was, "Whose turn is it to distribute the materials today?" After considerable quarreling and argument among the pupils two boys were finally chosen. Then there was much confusion in distributing the materials. A number of pupils did not have their own supplies and still more time was wasted, so that the period was approximately half over before everybody was satisfied and ready to go to work. In one instance much time was wasted because the distribution of supplies had not been habitualized; in the other the minimum time was consumed because the habits connected with the distribution of the materials were well established.

An activity which ought to be habitual with the teacher is the method employed in taking the roll or attendance. Teachers have been known to call the roll daily with classes of thirty or forty pupils. It would be much easier and more economical to have the pupils placed in certain seats and have a chart showing each seat with the name of the pupil who occupies it. Then a glance at the chart will show at once whether or not a pupil is present, and will save considerable time. If, in taking the roll, a teacher saves only one minute on a class, the amount of time saved is far greater than one would expect. Suppose a teacher has six periods per day and could save one minute on each recitation in calling the roll. This would be a net saving of six minutes per day. In a nine months' school term this would be equivalent to approximately three days of school time saved. A careful checking of wasted time in other cases would doubtless soon

show the teacher that it is an easy matter to save twenty-five or thirty minutes a day of her teaching time. This, of course, would be equivalent to lengthening the school term approximately a month.

Finally, among the habits a teacher forms in the schoolroom, the habit of dictating material to be copied ought to be carefully watched. Unnecessary copying of long questions on the part of the pupil is wasteful. Writing a certain assignment a particular number of times will almost always bring diminishing returns. Many times long written notebooks cannot be justified. It is easy to waste a large part of the recitation time in dictating unnecessary written assignments. A teacher who tends to err in this direction would do well to ask herself constantly whether a particular dictation exercise can be justified. If she cannot justify it in her own mind it would doubtless be well to dispense with it.

Schoolroom economy is greatly affected by failure to measure the capacity and achievement of the pupils. Much has been written on the importance of knowing the individual pupil's capacity for achievement. There are many intelligence tests available for the teacher's use in measuring the pupil's ability. While the whole question of the constancy of the I.Q. and the permanence of a certain mental capacity is in question, few authorities will question the fact that nature does set limits on the capacities of individuals, beyond which it is impossible to pass. If the teacher knows the pupil's capacity for profiting by instruction, she can grade her material accordingly. It is probable, however, that more pupils fail to profit by the instruction because the material is improperly presented or because they are unwilling to learn, than because they are unable to make good. It is the teacher's business to take the pupil as he is and strive to bring him up to his capacity in achievement. It is easy for a teacher, when a pupil is failing to understand the work, to fall back on the old alibi that he is mentally deficient. It is more probable that his trouble is a failure in interest, desire, and ambition than that it is in his mental make-up. To make sure, however, each teacher should know the mental capacity of the pupils she is endeavoring to teach.

Teachers not only fail to measure the intelligence or capacity of the pupils, however, but oftentimes much effort and energy are wasted by failure to measure the accomplishments and achievements of the pupils. There are many standardized tests for measuring the accomplishments and achievements in school subjects. Not only in standardized tests, but in unstandardized tests is it possible to know whether the pupils are reaching standardized norms or not. For example, the following norms have been set up by writers as expressing the rate at which children in different grades should read: ¹

TABLE 4
READING RATES ATTAINED FOR PUPILS AFTER TRAINING

GRADE	IV	V	VI	VII	VIII
O'Brien.....	236	278	293	322	393
Oberholtzer.....	156	186	234	282	288
Courtis.....	160	180	220	250	280
Gary.....	140	166	185	198	204
Starch.....	144	168	192	216	240
Brown.....	213	269	272	279	290
Gray.....	180	204	216	228	234

The rates expressed here differ, partly because of the subject matter that was read and partly because of the time in which the rates were fixed. It will be noted that Dr. O'Brien's reading rate is greater than any of the others present. It likewise is a more recent proposal of reading norms. In as much as improvement in reading rates is a continuous process, it should be expected that as we advance in our knowledge of teaching reading the reading norms advanced by different writers should be increased. A very effective informal test can be made by having the children turn to a special place in the readers and then read for two or three minutes according to the teacher's watch. Then by counting the words read, one can tell rather accurately whether the children are reading up to standard norms or not.

¹ O'Brien, John Anthony, *Silent Reading*, The Macmillan Company, 1921, page 203.

By asking them to write the answers to a few questions based on what they read, the comprehension of the children could also be fairly accurately estimated. Of course, a teacher who sets about increasing the pupils' reading rate should bear in mind that rate without comprehension avails nothing. Comprehension should be measured when the speed of reading is measured. There are also on the market today writing scales that make it possible for the teacher to measure rather accurately what the pupils are achieving in writing. Since another chapter in this text is given to tests and measurements, no further discussion of this point will be given here.

A second way that a teacher could measure the achievement of her pupils is through the process of achievement curves. By plotting on a graph the achievement of the pupils in a particular subject each day and then connecting the point on the graph by a smooth curve, each pupil can readily see the extent to which he is making improvement. "Learning curves" have been found to be one of the greatest incentives to better work, and they have the specific advantage of inculcating the desire in the pupil to compete with his previous record rather than with one of his fellows. The by-products of rivalry where one is competing with his own previous record are not nearly so questionable as when he competes with another member of his class. For a fuller discussion of learning curves and their use see Chapter VI on the learning process.

A third way of estimating the achievement of the pupils is by trying to measure their ability to sustain attention. Attention can be cultivated, and through proper devices in teaching pupils may be taught to concentrate. For example, a teacher who wants to teach pupils to give more attention to reading and to cultivate the ability to select the key sentences in the reading lesson might use the following device:¹ Ask the pupils to think of each page of the reading lesson as divided into five parts, designating the divisions of the page A, B, C, D, and E. Tell the pupils to mark the paragraph on the page that they con-

¹ Boraas, Julius, *Teaching to Think*, The Macmillan Company, 1922, page 65.

sider most important, 5, the paragraph next in importance, 4, and so on down to the least important paragraph, which would be marked 1. When the pupils appear at class, each is to state the paragraphs which he has weighted. An individual pupil's report might look something like this:

PARAGRAPH	VALUE
56,C	5
61,A	2
56,D	3
51,B	1
68,D	2

By plotting the answers as given by all the pupils, and taking an average weighting in each paragraph reported, each pupil could see to what extent he deviated from the class judgment on any particular paragraph. For example, if Pupil A marked paragraph 52,B as worth 4, and Pupil B marked it worth 5, and Pupil C marked it worth 3, and Pupil D marked it worth 4, the average for the class, if there are only four pupils in the class, would be 4. Consequently, Pupil A deviated nothing from the class average, Pupil B deviated 1 from the class average, Pupil C deviated 1 from the class judgment, and Pupil D deviated nothing from the class judgment. Therefore, we would consider that Pupils A and D used the best judgment in weighting this paragraph, since their judgment exactly agreed with the judgment of the class. With this device the teacher substitutes the class judgment as a standard for grading each pupil. If the teacher sees that the judgment of the class is wrong she can, by skillful discussion, lead the pupils to see where they are wrong and why they are wrong, and thus develop a better class judgment of the relative value of the different paragraphs.

Another way to develop the attention of the pupil is to present certain problems or puzzles of the curiosity type that will give him some practice in strong motivation. Excellent results have been obtained by asking pupils to do the following: Change the word "black" to "white" by changing only one letter at a time and writing a complete word each time. The idea, of course, is

to see how few words are necessary in making the change from the word "black" to the word "white." Changing the word "cold" to "warm" and "brown" to "green" is just as effective in practicing this problem. The practice which pupils get through solving the puzzle type of problems, is nearly always accompanied by strong motivation and curiosity. It will tend to overcome mind wandering and can undoubtedly be carried over to some extent into other fields of work. Some teachers have also obtained excellent results in encouraging concentration by placing a limit on the number of times a lesson can be read. One teacher of history found her pupils reporting that they had read the lesson three or four or even ten times and still could not learn it. The teacher made the suggestion that no pupil read his lesson more than twice. The result was closer concentration and effort, with much improvement in the achievement of history as well as increased interest in the study.

Finally, it should be said that a teacher who wants to develop attention and concentration in pupils must leave them some leeway for initiative and originality. Too often there has been blind insistence on following rules without thinking. A good example of this is an illustration taken from John Adams. Adams reports the following problem as presented to a class in arithmetic in a seventh grade grammar school: ¹

"If 7 and 2 make 10, what will 12 and 6 make?" A look of dismay passed over the seventy-odd faces as this apparently meaningless question was read. Everybody knew that 7 and 2 did not make 10, so that was nonsense, but even if it had been sense what would be the use of it, since everybody knew that 12 and 6 made 18 and nobody needed the help of 7 and 2 to find this out. Nobody knew exactly how to treat this strange problem.

Fat John Thompson, from the foot of the class, raised his hand and asked, "Please, sir, what rule is it?" Mr. Leckie smiled as he answered, "You will have to find that out for yourself, John. What rule do you think it is?" But John had nothing to say to such foolishness. What's the use of giving a fellow a problem and not telling him the rule? But as it was a heinous sin in the seventh grade

¹ Adams, John, *Exposition and Illustration in Teaching*, The Macmillan Company, 1910, pages 176-177.

to have nothing on your slate, John proceeded to put down various figures and dots, and then went on to divide and multiply them turn about. He first multiplied 7 times 2 and got 14, then divided by 10 and got $1\frac{2}{5}$, but he did not like the looks of this. He hated fractions. Besides, he knew from bitter experience that whenever he had fractions in his answer he was wrong. So he multiplied 14 by 10 this time and got 140. They both looked nice, easy, good-natured numbers. Then he thought 12 ought to come out of 14, but when he found that his answer was 11 with 8 over he knew that he had not yet hit upon the right track, for remainders are just as fatal in answers as fractions, at least that was what John thought. Accordingly he worked out different false moves in division and fell back on multiplication. When he had multiplied 140 by 12 he found the answer 1680. This seemed to him a nice, big, sensible sort of answer. Then he began to wonder whether division was going to work this time. As he proceeded to divide by 6, his eyes gleamed with triumph. Six into 48, 8 and nothing over. Two minus 8 minus 0 and no remainder. I have got it! Here John fell back in his seat, folded his arms and waited patiently till his less fortunate fellows had finished.

Now, it is manifest here that the teacher's trouble lay in her failure to teach John to read his problem carefully and to ask himself constantly what he is to do. Instead, John had been taught to follow the rule, and it was not always an easy matter to see which rule the problem came under.

Poor schoolroom economy is often caused by inefficient methods of teaching. Under this heading attention should be called to:

1. PREVENTION OF ERRORS. Much teaching in the schoolroom has to be done to overcome errors already learned. Good teaching might very well be measured by the extent to which errors are prevented rather than the success with which errors are corrected. Teachers, time without number, inculcate, develop, and drill in habits and skills that somewhere along the line it requires a great deal of energy and effort to correct. For instance, it is common practice to teach the number combinations by permitting the child to count to the result. If a child is asked "How much is 4 plus 3?" the immediate response should be 7, and any time he is permitted to count from 4 to 7 he is developing a habit that will sooner or later have to be eliminated

and corrected. When a teacher has the children attempt to write their words in spelling before they have had a chance to study them, the result will invariably be the formation of many wrong impressions.

In the schoolroom it is very easy to stamp in the wrong impression. One of the authors visited a negro teacher who had the reputation of being an excellent teacher and observed the teaching of a geography lesson, in which the central states were being learned. A little boy in the sixth grade was asked the first question. The question was "What are the central states?" The boy named almost every state in the Union except the central states. No correction was made by the teacher. The next pupil was called on to name the central states; this was kept up until each pupil in the class had had a chance at the question. No pupil had answered the question correctly, and at no time during the recitation did the teacher explain their errors or write the central states on the board or do anything else that would tend to put the correct form before the pupils. It is safe to predict that as long as those pupils live they will always have trouble in remembering what states form the central group. If at the beginning of the recitation a map showing the central states had been displayed, or the names of the central states had been written correctly on the board and studied and talked about and looked at, it is very probable that every pupil would have left the class with the correct impression. As it was, almost every impression was carried from the class except the correct one.

Some of our psychologists are emphasizing the importance of flash cards, and the best teachers of reading recognize the value of such devices, but there is considerable evidence at the present time that if reading is properly done and the prevention of wrong habits properly emphasized, the value of the flash card will be materially reduced. In other words, the real value of flash cards at the present time seems to be in the correction of errors. It is certainly far better to prevent such errors than to have to correct them.

2. SPECIFIC ASSIGNMENTS. The teacher who fails to make the assignment definite and specific leaves room for much wasted energy and effort in the schoolroom. This has been shown by experimental evidence time and again. A teacher can hardly over-emphasize attention given to the assignment. Even when the assignment has been made by the teacher in such a way that she feels it is definitely understood, a few questions put to the pupils will reveal that there is much confusion in some of their minds as to what is to be done. When a pupil is to prepare an assignment for the next day and does not know exactly what he is to do, he not only will waste a lot of time, but will undoubtedly be discouraged and do his work half-heartedly. Definite assignments should not only be made but also they should be held to rather rigidly. A three- or four-minute quiz at the beginning of the recitation on the advance assignment is a great stimulus in impressing pupils with the importance of preparing thoroughly each day's assignment.

In making specific assignments teachers should recognize the importance of psychological laws. For example, in a drill lesson it has been shown that pupils will not give sustained attention to a rapid-fire drill lesson for more than five minutes. Therefore, a teacher who assigns a drill lesson and spends a twenty-minute period on drill work is wasting much of her effort. It would be better to drill five minutes, do something else for a short period, and then come back to drill again.

Schoolroom economy is often affected by lack of incentive. If work is to be done by the pupils efficiently there must be a strong incentive to work. The best incentive an individual can have for his work is a thorough realization of the value of the subject matter. This cannot always be realized, however, and sometimes teachers revert to artificial means in order to stimulate interest. There is no attempt here to decry the value of artificial incentives as long as they are used as means to ends rather than as ends in themselves. Incentives to work are absolutely essential and must be created in one way or another. A teacher often resorts to starting competition in the classroom

in order to arouse more interest. Psychologists recognize the importance of competition and rivalry. Most of them, however, put out a word of warning concerning the by-product. When pupils compete with each other so intensely that attitudes of hatred and unfair play result, then the incentive of rivalry is quite objectionable. Everyone agrees that keen interest is one of the most important driving forces of life. It is an important factor in increasing output. H. D. Kitson found that hand compositors in the printing industry increased their output forty per cent when they were given a particular wage incentive. These printers, who had been working at their trade on an average of ten and three-tenths years, made an average gain in output of seventy-eight per cent in five months when their wages were determined by the amount of work done.

Not only is lack of interest a waste in accomplishment of the subject matter, but also it is frequently the cause of much waste in the pupils' attendance. The waste in education due to irregular attendance has never been fully realized. Some evidence of how great the waste through this source is, may be seen in an extract from a study made by John F. Bender in the *American School Board Journal* for December 1927. He found that in South Carolina the average attendance for country children was reported as sixty-seven per cent. In other words, it appears that in this state the people are throwing away approximately one-third of their school taxes which go to educating children. In Montana a loss represented by lack of attendance is given as twenty-seven and eight-tenths per cent. Kentucky reports that at least one-third of the state school fund is annually wasted through non-attendance. Tennessee reports thirty-four per cent of the teaching period lost by irregularity of attendance, making the average term for country children only sixty-nine days. Texas reports a loss of \$10,000,000 in school funds through irregularity of attendance. Many other states did not make reports, but in every state in the Union there seems to be an enormous waste in the schools through irregularity in attendance. Such irregularity can be traced in many instances to a

lack of interest and incentive on the part of the boys and girls to profit through the school offerings. This loss is being greatly reduced through a more rigid enforcement of the compulsory school law, but one cannot hope to eliminate all the waste due to poor attendance by the compulsory school law alone. It should be the ambition of every teacher to develop greater interest in school and thus supplement the attempts of the compulsory school law.

Schoolroom economy is often affected by waste through lack of school morale. During the World War someone said that morale would win the war. This idea should be carried out in the schoolroom. The most efficient school is likely to be accompanied by strong morale on the part of the pupils and the teachers. One of the essentials of a good school spirit is a coöperative teaching staff, that is, a teaching staff in which every teacher realizes her share and her responsibility, and is willing to do more than her regular job any time it seems necessary. Second, with the proper school spirit there must also be good pupil fellowship. Class consciousness ought to prevail. This should be manifested on the playground, in the assembly, in the entertainments. The ideal of tolerance, the give-and-take spirit, and the attitude of standing by each other must permeate the thinking of every individual in the school. The third essential is the proper teacher-pupil attitude. The attitude must not be such that pupils are fighting the teacher and the teacher undertaking to rule with an iron hand. A school that has the proper spirit will recognize that the mass and not the master should be the ruling and guiding hand. In the fourth place, school spirit must be marked by community spirit, a willingness on the part of the parents and those outside the school to come to the rescue and to be willing to support and augment the efforts made at school. In one school the writer visited where the school spirit was very strong, it was noticeable that the people in the community never referred to "the school" but always to "our school." The "our," or the feeling of "we-ness," is one of the essentials of a desirable school spirit.

QUESTIONS AND EXERCISES

1. To what extent can the principles of business management used in industries be utilized in the business management of the schoolroom?
2. A principal of a certain school called a faculty meeting on Saturday before the school opened on Monday. At the meeting the principal made the suggestion that teachers would be expected to be at the school building by eight o'clock in the morning, and that any teacher who was as much as a minute late would be counted tardy. Some of the teachers objected to such a rule on the ground that it tended to make the school too much like a machine. Who was correct?
3. Think of the teachers you have had who seemed to you to best understand human nature. In what ways did this quality appear to be of aid in the management of the classroom?
4. Suggest a list of ten types of physical exercises you would especially recommend for teachers.
5. Assume you are teaching a fourth grade class and find your pupils are unusually poor in reading, both in rate and comprehension. What remedial steps would you take?
6. What are the real dangers that may result from making an indefinite assignment?
7. To what extent would one be justified in considering poor school attendance a measure of interest in school. List the dangers in such an assumption.
8. Is it true that poor school habits will carry over into life?
9. Suppose you are about to begin teaching your first school and you are to have a conference with your superintendent or principal the day before school opens, what are some of the things involved in school-room economy that you would probably want to talk over with him?
10. What are the laws of habit formation? Do poor habits formed in school tend to carry over into life?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER V

SCHOOL DISCIPLINE

Students like horses on the road,
Must be well-lashed before they take the load;
They may be willing for a time to run,
But you must whip them ere the work be done;
To tell a boy, that if he will improve,
His friends will praise him, and his parents love,
Is doing nothing—he has not a doubt
But they will love him, nay, applaud without;
Let no fond sire a boy's ambition trust,
To make him study, let him learn he must.¹

The above quotation is typical of the old conception of school government. It was generally believed that children were born bad and that they must have their wills broken. John Wesley at one time gave this bit of advice to parents:² "Break your child's will. . . . even if you have to whip it ten times running." In that day the old doctrine "spare the rod and spoil the child" was invoked on all occasions. Play was looked upon as something sinful and a thing to be crushed out at all costs. Children were expected to study a curriculum whether they liked it or not. Naturally, there was much resentment against this type of school. Corporal punishment had to be inflicted frequently and the following notes, taken from the record of the old Swabian schoolmaster, Hauberle, are probably typical.

This record is a good illustration of the extent to which punishments were inflicted and of the details of such punishments. Hauberle³ had taught school fifty-one years and a computation

¹ Cubberley, E. P., *The History of Education*, Houghton Mifflin Company, 1920, page 456.

² James, William, *Talks to Teachers*, Henry Holt and Company, page 182.

³ Cubberley, E. P., *The History of Education*, Houghton Mifflin Company, 1920, page 455-456.

of punishments he inflicted showed the following: 911,527 blows with a cane, 124,010 blows with a rod, 20,989 blows and raps with a ruler, 136,715 slaps on the hand, 10,235 blows on the mouth, 7,905 boxes on the ear, 1,115,800 thumps on the head. He had made boys kneel on peas 777 times, on a triangular piece of wood 613 times, wear the jackass 3,001 times, and hold up the rod 1,707 times. Of the blows with the cane 800,000 were for Latin words and approximately 17,000 were reminders of texts from the Bible. Mr. Hauberle had approximately 3,000 expressions with which he could scold.

It is hard for the average reader of the present day to realize the amount and types of punishments that were inflicted at that time. It is claimed that in Boston about 1845, in a school of 400 enrollment, on an average one pupil was whipped every six minutes. This meant that on an average, a pupil knew almost surely when he left home to go to school on Monday morning that he would be whipped before the week was over. Naturally, this was not conducive to good school spirit. Pupils probably did not vie with one another to see who could stay in school most regularly.

It was the custom in schools of that day to lay down rules and regulations on the first day. Children were expected to follow rules to the letter. The following rules are taken from a teacher's contract which was signed by a teacher in Kentucky, November 7, 1800. The teacher was expected to enforce the rules strictly.

RULES TO BE OBSERVED AND STRICTLY ATTENDED TO IN THE
LULLEBEGRUD READING SCHOOL

1st. The Teacher and Scholars to appear at the Schoolhouse each Morning if possible, by half an hour by sun; with Hands and faces cleanly washed and Hair neatly combed.

2nd. Fires to be raised by the male Scholars in Rotation, according to arrangement, the House to be cleanly swept twice a day by the females in the same manner.

3rd. Scholars to be particular careful not to dirty or tear their Books and Clothes.

4th. The Pupils are to be Kind and civil to each other and by no means to call one another out of the proper Names.

5th. In School Time, each one is to keep his or her Seat unless necessary Reasons or orders require the contrary. Two are not to be absent at one time without Leave obtained or order given; nor even one without he or she bears the token of Absence.

6th. Each one is to mind his or her own Business during Book Time and there is to be no teasing, Laughing, Hunching, Whispering or making Mouths to provoke others during the hours of exercise.

7th. If any Scholar is at a loss and wants Instruction in any Word or part of his lesson they shall apply to the Master.

8th. When the Scholars, whether in or out of school, have an occasion to speak to or of the Master it shall be with the Title of Mr. Barrow and in like manner to or of all married Persons and grown unmarried persons. Master or Miss with only their given Names and when in Conversation with all such the Term Sir & Madam are to be used.

9th. The hours of Play diversion are from half past 11 till one in the Winter, and so in proportion as the Days lengthen.

10th. Diversion at Play-Time are, Running, Jumping, Prison-base but wrestling, Climbing and such as endanger the Clothing or Limbs will not be admitted.

11th. Quarreling, Swearing or Cursing, Lieing, using obscene Conversation, giving one another the Lie, and Fighting will demerit the severest kind of Punishment.

12th. The girls are to exercise innocent diversion to themselves.

13th. The Punishment for Transgression are three, Viz., the Laugh block, Imprisonment and the Rod.

14th. If after necessary Means have been used, and there should be any Scholar that cannot be broken of Quarreling, Swearing, Curseing &c. he shall with the advice of the Trustees be expelled from the School.

15th. Additions to be made to the Rules, as Occation require.

16th. No Scholar to be admitted or allowed to continue in School who has the Itch.

17th. The Scholars are not at Playtime or coming to or going from School Unnecessarily to be Halloing, Shouting, Noising or making fearful Outcries.

18th. The Scholars are not to pillage one another's School Baskets, Snatch Food from each other hands or take from each other or any else, anything which is not their own.

19th. If it appears necessary, a Monitor will be appointed, from Time to Time to give information of Disorder that be committed out of School.

In one school which one of the writers attended, the reading of the rules on the first day is still a vivid incident. The teacher on this particular occasion propounded what he called the constitution and by-laws. In the constitution and by-laws were suggestions such as the following: no pupil will be permitted to crush paper during school; no pupil shall put his arm on the back of the seat behind him; gum-chewing will be prohibited on all occasions.

The reading of these rules, before anyone knew there was a need for them, naturally suggested to pupils things to be done. Boys and girls who had not thought of chewing gum previously would want to begin chewing it after the suggestion had been made. Not only does such a procedure suggest offenses that might not otherwise be committed, but when trouble did arise few teachers thought of treating it as a social matter. The individual was considered a culprit who was solely responsible for his acts, and corporal punishment was almost always thought to be his due. That we have changed materially in this respect may be seen from an article published recently in *School and Society*. In this article the author reports on the number of cases of corporal punishment inflicted in the city of St. Louis at varying dates. The following table is self-explanatory: ¹

TABLE 5

NUMBER OF CASES OF CORPORAL PUNISHMENT AND OF SUSPENSION,
BY FIVE-YEAR INTERVALS, IN ST. LOUIS SCHOOLS, 1881-82 TO 1924-25

YEAR	CORPORAL PUNISHMENT	SUSPENSION
1881-82	4,981	353
1886-87	2,975	351
1891-92	1,749	308
1896-97	1,849	342
1901-02	666	206
1906-07	719	309
1911-12	561	272
1916-17	153	185
1921-22	82	123
1924-25	124	145

¹ Davis, H. H., "Corporal Punishment and Suspension," *School and Society*, Volume 38, page 632.

From the above table it appears that in 1881 to 1882 there were forty cases of corporal punishment to one in 1924 to 1925, and more than twice as many suspensions. When one considers the enrollment in 1924-25, in comparison with the enrollment in 1881-82, he will realize more keenly the extent to which corporal punishment is rapidly being outgrown in the city schools of St. Louis. Doubtless in this respect St. Louis is typical of other school systems in the United States.

Why School Discipline Is Important. That school discipline is important is evident. Some reports indicate that twenty per cent of the teachers who fail in their first year of teaching do so because of their inability to discipline and control the school. We cannot be sure, of course, what the data indicate in this matter. Often poor school discipline is the result of a general weakness in teaching and the discipline is only the outer appearance of this weakness. Consequently, even when a teacher is dismissed from school for what is claimed to be failure in maintaining discipline, other weaknesses may be more directly the cause than the failure in discipline.

Poor discipline is directly harmful to pupils. It is usually reflected in their habits and attitudes. When one finds a school that is poorly disciplined the chances are very strong that work will be done in a slovenly manner, that books will be roughly handled, floors strewn with paper, and that conditions will not be conducive to proper learning. It is not difficult for adults today to picture a school where the discipline was poor. It was oftentimes so poor, in fact, that it was not uncommon for children to push each other off the seats and carry on audible conversations while the class was actually reciting. Fighting on the playground was common. In such a school the children generally had a very bad attitude toward their work. The floor was likely to be littered with paper. The children very probably were carelessly dressed and assumed poor postures when asked to stand and recite. The whole atmosphere reflected the bad conditions that existed in disciplinary control. Such a condition is very harmful, for a good disciplinarian is of great importance in developing the right attitudes in boys and girls.

In a democracy we want obedience but at the same time we want to develop initiative. It is an easy matter sometimes for teachers and parents to enforce obedience, but too often it is done by crushing initiative. The old idea that children were to be seen and not heard carried with it a bad philosophy. Consequently, we are not advocating here, that deathlike, pin-drop theory of discipline, but instead the type of discipline and obedience which is necessary for systematic and effective work.

Modern education breaks squarely with the old doctrine of discipline for the sake of discipline. Dr. Caldwell in the *Twenty-sixth Yearbook of the National Society for the Study of Education* emphasizes this point in the following words: ¹

Extraneous discipline is sometimes unavoidable, owing largely, I am persuaded, to our inadequate knowledge of child psychology, teacher psychology, and subject psychology; but if arbitrary discipline is permanent, if growth is not rapid toward discipline in control and in achievement by and within the persons who receive it, it is relatively futile. Jails, homes for the dependents and the unfortunates of various kinds are instituted by society for the use of persons who have not developed the type of discipline which modern education is ambitious to secure. It is not, then, less discipline which modern education wants, but more. It is not the discipline which enables one to march mechanically with the crowd of soldiers at the command of the officer, but the discipline which enables the individual to accord himself with the group, because of his own knowledge that this is essential to effective endeavor. Modern education, then, demands severe discipline of person and in achievement, but on an individual and social level not previously required in educational activities. Much experiment will be needed to bring subjects of study and school procedure into accord with this objective.

Purposes of School Discipline. One may summarize the purposes of school discipline under the following headings:

To prevent waste. Unless one has reasonably good discipline in the schoolroom much effort will be lost. Order and system are essential for any group that is to exist. This is even more necessary when the group must carry on the type of work

¹ Caldwell, Otis, *Twenty-sixth Yearbook of the National Society for the Study of Education*, Part 1, page 275.

that is being done in the modern school. Bad order on the part of one pupil may so interfere with the attention and study of the other members of the class that all the effort put forth will be wasted. Much waste may also accrue from a failure to systematize the distribution of supplies and equipment, the passing of lines, and the making of assignments. One inattentive individual in a school is likely to radiate his influence through other members of the class. Inattentiveness is contagious just as attentiveness is.

To develop right attitudes. A second purpose of school discipline is to develop the right attitudes toward school. A school in which controls are lacking is a school in which respect for law and order cannot be well developed. No one enjoys an atmosphere where nothing is accomplished, where no lines of responsibility are drawn and where no means of control are definitely established. Poor discipline is usually accompanied by poor lessons. Poor lessons are good breeders of poor interest and inattention. The result is likely to be a general loathing rather than a love for the school and its work.

To develop desirable habits of life. A third purpose of school discipline is to develop desirable habits of life. In a democracy it is important for individuals to learn to be good citizens and to acquire an attitude of coöperation and helpfulness toward each other. As a child passes through school each teacher leaves her impress upon him. Every class discussion leaves its effect. The cumulative effect of all these impressions will tend either to good citizenship or to bad citizenship. A child in school who never participates in order, system, and good discipline will probably find himself ill equipped in life for conforming to the rules and regulations of a democracy. If he is taught that he must not cross lines at the wrong time he will be more likely to stop at the red light signal out in life. It should be stated here again that good discipline does not mean quietness nor a pin-drop stillness. In fact, the best evidence of good discipline is that it does not call attention to itself. If a supervisor goes into a room and finds the discipline of the school a thing that attracts attention it is

likely to be bad discipline, and this is true, whether it manifests itself in a deathlike silence or in confusion that means no progress for anyone.

Secrets of Good Discipline. Some of the things which must be taken into consideration in order to maintain good discipline are mentioned under the following headings:

The substitution of the mass for the master. None of us likes to be driven. There is something inherent in human nature that makes us want to participate and share in those organizations of which we are members. The social group is quite as important in our country as the individual himself. A great part of one's activities is carried on by members of a social group or by co-workers. We do not live our lives alone in a democracy; consequently if the teacher wants to win the coöperative attitude of her pupils she should bear in mind that there must be participation. The teacher who is wise enough to trust the judgment of pupils in questions of disciplinary control at times will, in many instances, find herself amply rewarded.

The first school taught by one of the best teachers in the South today bordered dangerously near absolute failure. Before starting school this teacher, then a lad of eighteen, went to an old, experienced teacher and asked his advice. The advice he received was, "Show them you are running it on the first day and you will have no trouble." This was interpreted to mean that every pupil who would not do precisely as the teacher suggested was to receive corporal punishment. In a little while it was quite evident that something was altogether wrong. The attitude of the pupils toward the teacher was anything but encouraging. The attitude of the parents was reflected in the attitude of the pupils. Undoubtedly the teacher would never have succeeded in finishing that school had this bit of philosophy been carried out, but fortunately, toward the middle of the year another teacher, also with wide experience, gave him this advice—"Go back to your school and tell those boys and girls that you want to change your whole school doctrine, that what you want is to substitute the will of the mass for the will of the

master, that you want the pupils to have a large say in the conduct of the school." This was done. The whole atmosphere of the school changed. The attitude of both pupils and parents materially improved. This teacher found as many others have, that one of the most important secrets of good discipline is the substitution of the will of the mass for the will of the master.

Good discipline is based on interest. When children are interested in the work they are doing discipline is not likely to be a problem. The trouble with too many schools is the pupils' failure to realize the worth of what they are doing. In other words, they lack interest in their work. This is often due to the fact that children fail to see the particular value of the subject matter. They do not see that their lives will be materially affected, whether or not they learn the particular lesson assigned. One reason for this is the failure to grade the subject matter properly. Oftentimes the subject is too difficult for the child. He is unable to grasp easily the subject matter set before him. He does not feel the thrill of success. For this reason teachers should keep in mind the fact that unless the subject matter can be tied up in some way to the life of the individual, the problem of discipline is likely to make itself manifest.

In the last analysis interest is personal. If a salesman wants to sell an article to a customer he does not usually try to get the customer to buy because it is a good thing for the salesman, but because it is a good thing for the customer. If one would have pupils interested in their subjects he must tie the subject matter up in such a way that it makes a personal appeal. The alert, energetic teacher can usually do this with children of known capacities.

*Knowledge of the instincts is a secret in discipline.*¹ One who would have good discipline must give considerable attention to the instincts. In the last analysis interest is instinctive. Among the instincts that are of tremendous value to the teacher in disciplinary control may be mentioned:

¹ For the position of the authors on the controversial subject of instincts, see Chapter XXIII.

1. THE GANG INSTINCT. There are few normal boys and girls that do not some time or other belong to a gang. The gang may be small, consisting of three or four members or large, including twenty-five or thirty. Gang life is one of the most perplexing problems the police in our modern cities face today. The presence of gangs in school also must not be ignored. Usually when a boy joins a gang he will be sworn under secrecy into the rites of the gang and will be expected under all circumstances to stand by the gang. For example, a high school principal discovered that the lock had been taken off the gymnasium door. He called the suspected boy into his office and said, "Did you take the lock off the gymnasium door?" The reply was, "I did not." "Well, who did?" inquired the principal. The boy replied, "I know, but will not tell." To this response the principal said, "You will either tell or take your books and go home. Take your choice." The boy said, "I'll take my books and go home."

Who was wrong, the principal or the boy? Should the boy have told the principal who removed the lock? When one is a member of a gang, does he owe allegiance to the gang? Is it probable that if he failed to respect the gang he would fail to respect the laws all good citizens are supposed to obey? If one is a member of a gang and he cannot convince them that they are wrong in some particular activity, should he swallow his own convictions and stay with the gang, separate from the gang and keep quiet, separate and tell, or tell and try to stay in the gang? The teacher who has the problem of the gang to deal with will soon discover that the gang spirit is not to be crushed but to be utilized. What she should do is to try to get the gang to see that the same spirit that makes them stick together is the spirit that ought to be manifested in the interest of the school. In other words, a teacher should not try to crush the spirit that creates the gang but instead should try to direct it toward the social good and thus create the same loyalty to the whole school as will be found manifested in the gang.

2. LOVE OF THE APPROVAL OF THE GROUP. It is instinctive for children to want the approval of their fellows. For this reason one of the best things a teacher can do is to play upon this instinct. Let the group give its approval to those acts which are desirable. Let the group have something to say about what is desirable and what is not. A boy fears the criticism of his peers more than his elders. When the school group places its disapproval upon a certain act the average pupil will be reluctant to act contrary to that criticism.

3. THE INSTINCT OF CURIOSITY. Probably the instinct of curiosity has caused more seeking of knowledge and led to more discoveries than any other one thing. This instinct should be developed far more in school than it has been in the past. To really love school one ought to be intensely curious to learn. This spirit of curiosity will be contagious. It will be backed up and carried on by pupils. A speaker who can play upon the curiosity of his audience has gone a long way upon the road to success. A teacher who knows how to play upon the curiosity of her pupils has a fine weapon for school discipline. This knowledge can be utilized in suggesting problems that arouse interest, in closing the recitation at an intensely interesting point and in reading books that strongly appeal to the instinct of curiosity. The reader will find it interesting to give this problem to his class to see the extent to which the instinct of curiosity plays its part:

A and B are two stations five miles apart. A train is on the track with a caboose at B and the engine headed toward A. The train is one mile long. A man is standing on top of the caboose. When the train starts to pull out toward A the man starts walking on top of the cars toward the engine. When the engine gets to Station A the man has reached the engine and is at Station A also. How many miles did this man walk and how many did he ride?

Many other problems that will arouse the instinct of curiosity can be called to mind by the reader.

4. THE COLLECTING INSTINCT. There is something about individuals that makes them want to collect things. This instinct for collecting should be used to advantage in the schoolroom. Sometimes it is a difficult matter for a teacher to decide when a boy is stealing and when he is making a collection. If a pupil collects all the pencils in the schoolroom and puts them in his desk the teacher's first impulse will be to call him a thief and accuse him of stealing. Possibly the collecting instinct was the main driving force in the child and he had no intention whatever of stealing. A salesman recently inquired of a teacher whether he knew anything particularly interesting about Browning. When the salesman was asked why he wanted to know about Browning he said, "I am making a collection of all of Browning's peculiarities that I can find." This salesman had no intention, according to his statement, of publishing his findings. Apparently his propensity for collecting was being satisfied in this way. Teachers ought to make use of the collecting instinct in the schoolroom. Instead of allowing the boy to collect all the pencils in the schoolroom let him collect specimens of nature, Indian artifacts, postage stamps, or any one of a number of things that might interest him. The collecting instinct should be utilized. Build upon it. It is a fine thing.

5. THE TENDENCY TO MANIPULATE. The urge in children to do things is strong. Often a teacher will discover budding tendencies toward self-expression which should be utilized. A college president relates the incident of a five-year-old girl who had a strong talent for drawing. She drew pictures on the walls and floor of her home. Her mother did not approve of drawing. When she went to school she unfortunately had a teacher who told her that school was no place for drawing pictures. Later in life this girl said, "My mother and my teacher together crushed out of me the desire to draw." The president of this college rightly asks whether it may not have been possible that this girl would have possessed the genius of a Raphael had her talent been developed. Probably this talent could have been developed into the ability of a great artist.

Watch these budding tendencies. The pupil who expresses his feeling of dislike toward his teacher by drawing her picture probably has some drawing ability, otherwise he would have expressed this dislike in some other way. Today, education is emphasizing creative expression and activities. What better place could there be for giving a child an opportunity to express his creative capacities than in the schoolroom?

6. THE WANDERLUST INSTINCT. Outdoor life makes a decided appeal to most boys. A boy who does not enjoy being in the big out-of-doors has probably been coddled too much. The freedom of the outdoors, its opportunities for wandering, tend to pull many a boy out of school. No one knows the extent to which this has been an influential factor in truancy and "hooky." An illustration of the bad effects which may accrue from this wanderlust tendency may be noted in the following quotation: ¹

The gang bummed school two weeks to take a camping trip to Fox Lake. We did not have no money; we must think up a scheme to get some. We knew it would be no use to ask our parents, so we went into a grocery store and asked for canned olives. When the guy was busy we slipped around to the drawer and got \$10, which paid our way to Fox Lake and bought us some eats.

The father of one of the gang had a cottage at Fox Lake, where he came on the week-ends; so we went there to camp. When his father came out on Saturdays and Sundays, we would take to the woods, where we had a lot of sport sleeping in the open.

One day when we got hungry we stole a chicken and a duck from a yard. Billie, who was the cook, fixed it for us. He did not get it done enough. I did not like it, but I was so hungry I ate it anyway, putting a piece of it in a half a loaf of bread. Then I was full.

That was a great trip out there. We had great fun swimming, fishing and tramping in the woods. Finally we decided to come home, and had to walk the tracks for fifteen miles. Jimmie stole a Ford on the way back, but we left it in some rich man's drive at Highland Park. We never did get caught for anything we did on this trip.

Creative work in good discipline. When children are busy and are interested in their work discipline is not a problem. For

¹ Thrasher, F. M., *The Gang*, The University of Chicago Press, 1927, page 169.

this reason teachers have rightly endeavored to create what is sometimes called "busy work." This is a fine thing to do, provided the work is of a type that tends to elevate the mind. A type of busy work such as having children punch holes in all the O's they can find in newspapers should be condemned. Many other higher types of busy work can be found which will be far more elevating and just as conducive to good discipline.

TABLE 6

PERCENTAGES OF 370 GRADUATE STUDENTS REPORTING THE EFFECT ON
WORK OF CERTAIN FACTORS

FACTORS	BETTER	SAME	WORSE
1. Reprimands before others.....	40.4	13.3	46.2
2. Reprimands to others.....	39.4	31.9	28.8
3. Reprimands in private.....	83.1	9.9	6.9
4. Sarcasm before others.....	10.0	12.9	77.1
5. Sarcasm to others.....	10.0	46.2	43.8
6. Sarcasm in private.....	18.2	16.9	64.9
7. Ridicule before others.....	7.2	23.8	69.0
8. Ridicule to others.....	10.4	58.7	30.8
9. Ridicule in private.....	21.2	15.2	63.6
10. Low marks.....	68.1	16.1	15.8
11. Low marks to others.....	32.4	63.0	4.6
12. Extra work as penalty.....	20.0	36.4	43.6
13. Extra work to others as penalty.....	21.8	71.5	6.6
14. Conference by teacher with parents....	85.7	12.5	1.8
15. Friendly conferences.....	95.6	3.9	.4
16. Public commendation.....	90.6	8.3	1.1
17. Public commendation to others.....	69.5	28.2	2.3
18. Commendation to parents.....	88.9	10.6	.5
19. Excused from work as reward.....	79.7	17.6	2.7
20. Worked for best liked teacher.....	95.1	3.8	1.0
21. Worked for least liked teacher.....	5.9	26.9	67.2

Rewards and annoyers in good discipline. One of the secrets of good discipline is proper appreciation of the use of rewards and annoyers. Every wrong response ought to be tacked with an annoyer. Every right response should be rewarded. The best types of rewards and annoyers most suitable for certain offenses are hard to find. Teachers usually indulge lavishly in commendation, praise, and encouragement, and often indulge just as liber-

ally in sarcasm and censure. The effects of praise and blame on school accomplishments have been studied by several writers. Experimental evidence indicates that animals learn faster when rewarded for their trial efforts than when punished, and that experienced printers increase their output with the promise of a bonus. A writer recently surveyed the attitudes of nearly 400 graduate students in relation to the effect of praise and blame. To be specific, they were asked whether they worked better, the same, or worse, in high school, under twenty-one situations. The situations presented, together with the average percentages, are as shown in Table 6.¹

Coercive Measures. Every teacher should strive for a positive rather than a negative type of discipline. It is much better to shape the environment so that the right responses will be brought about in children naturally than to use pressure to get the desired responses. Thousands of children in our most progressive schools today will be found doing the things on which society sets its approval, not because they feel they must but because some wise teacher through a proper shaping of the environment has made them *want* to engage in such activities. This is the ideal toward which every teacher should strive. The real good of all discipline should be the type of control that comes from within and not that which depends on external pressures.

As yet, however, the time has not arrived when any considerable number of teachers are able to dispense completely with some types of negative discipline. When it is necessary to resort to such methods of punishment, it is the duty of the teacher to keep in mind the concomitant effects as well as the more direct ones. Consequently, in a chapter on discipline one must give some attention to the subject of coercion.

Coercion is a negative type of punishment that must sometimes be used. It is pressure put on an individual by which he is forced to do something against his will. Before an individual is coerced, therefore, he must have had his mind set on doing a

¹ Briggs, Thomas H., "Praise and Censure as Incentives," *School and Society*, Volume 26, page 597.

certain thing, something must have intervened to keep him from doing it, and finally, he must have accepted the new line of action against his will.

When is coercion justified? No teacher can afford to conduct her school on a steady diet of coercion. Sometimes coercion is justified, but probably one would be safe in saying that coercion should never be employed until every other known device has been tried and even then coercion should not be used unless the individual has the ability and the talent to do the job successfully. In other words, a boy should not be compelled or coerced into playing a musical instrument unless the teacher or parent is reasonably sure that he has the talent for succeeding so that eventually the coercion can be removed and the interest in learning to play remain a sufficient incentive. Coercion, then, should be looked upon as a crutch. It is justified in helping an individual over a weak place, but should eventually be put down and thrown away. If the pupil, through coercion, fails to reach the point where coercion can be removed and action continue, it is pretty good evidence that one is not justified in using coercion in that particular situation.

Annoyers. In fastening annoyers to wrong responses the teacher should endeavor to make the annoyer fit the offense. Every wrong response should have some type of annoyer fastened to it, but the annoyer should be closely related to the type of offense committed. For example, some persons adopt the policy of subtracting from the pupil's scholastic grade if his deportment is below a certain mark. That is, if he fights on the playground until his deportment is brought below a certain point, this act automatically subtracts from an algebra grade. Consequently, a boy with strong proclivities for fighting may find that in such a school he has failed in algebra despite the fact that he might be able to make a grade of 100 in algebra. This annoyer is not a suitable punishment for the offense committed. If so, the grade he receives in algebra does not represent his achievement in algebra, but merely represents his deportment on the playground.

If a pupil copies a composition from another pupil, and a teacher asks him to write an original composition of his own she is closely relating the punishment to the offense committed. But if for copying the composition of another pupil, the teacher forces a child to copy 100 verses from the Bible she does not seem to be making use of an appropriate annoyer. One of the hardest problems a teacher has to face is to decide what annoyer and what reward to fasten to different responses.

Corporal punishment. Punishments are sometimes necessary in the schoolroom. Corporal punishments should be used as a last resort. At best they can only be an artificial means of getting work done.

Purposes of punishment. Society inflicts punishment for violation of its laws for one or more of four reasons: (1) to reform the offender, (2) to deter others from a similar offense, (3) for the protection of society, (4) for vengeance. In the schoolroom punishments should be inflicted only for their educative effects and for the protection of the group. Certainly no teacher is justified in inflicting punishment in order to deter others from the commission of a similar offense. As a matter of fact, a teacher is probably never justified in inflicting punishment on a child because of something he has done; rather, it should be to prevent his doing it again.

Punishments are of two kinds: natural and artificial. Natural punishments are those one suffers through a violation of nature's laws. Artificial punishments are those inflicted by one individual or group upon another individual or group. One characteristic of natural punishment is its certainty. One who violates the laws of nature is certain to receive punishment. Artificial punishment should carry over and utilize this characteristic. Probably one of the greatest causes of crime today is uncertainty of punishment. A study of crime in those countries where punishment almost inevitably follows law violation will show clearly that where the punishment is swift and sure there is decidedly less crime. On the other hand, in those countries where punishment for crime is slow and uncertain, the crime

wave is almost sure to be high. Our nation is noted for its failure to impose penalties. In the schoolroom the teacher should take care to see that penalties are imposed promptly and inevitably when an offense is committed. Artificial punishments are of all kinds—some of them severe and sometimes applied to major offenses. Others are minor. Among artificial types of punishment that have been used are the following:

1. **APOLOGIES.** When a pupil violates the rights of another pupil there is no more fitting punishment than a sincere, heart-felt apology. Often, however, pupils have been forced to make an apology to another pupil, or to the school, when there was no sincerity about it. Such an apology is mere mockery and will probably leave the pupil who makes it with a worse moral attitude than he had before.

2. **ISOLATION.** Many teachers have made successful use of the punishment of isolation. When children cannot get along with their fellows or when they are continually interfering with the rights of others, their isolation from the group for a time often brings about the necessary consideration for others. This may be done during the play or noon hour or at lunch time. One teacher who found that a certain boy interfered with the other boys while they were eating their lunches obtained good results by insisting that this pupil eat for a time in a room by himself.

3. **THE DISAPPROVAL OF THE GROUP.** As has been said before, pupils enjoy the approval of their fellows. The disapproval of the group, then, acts as a strong incentive in leading pupils in the right direction. If the group's ideals are right they can act as a strong deterrent in the violation of school privileges.

4. **LOSS OF PRIVILEGE.** Another punishment that is successfully used sometimes is the denial of certain privileges which other members of the class enjoy. Ordinarily a teacher should be very careful about taking the play privilege from children. Keeping them after school is another quite questionable form of punishment. Often a child is needed at home or should leave in order to ride on the school bus. Probably other privileges can

be taken away from the unruly child that will be far more effective than depriving him of his play time which he vitally needs to keep his physical condition fit.

The following principles, then, should be kept in mind in meting out punishments:

1. Certainty. It is not so much the intensity of the punishment as the certainty of it that will be likely to deter crime.
2. Adapt the punishment to the offense.
3. Do not let too much time elapse between the offense and the punishment.
4. Do not make rules and regulations too inclusive.
5. Rules and regulations should not be stated in such a way or at such a time that they will act as suggestions rather than preventatives.

QUESTIONS AND EXERCISES

1. Could a teacher make plans to meet disciplinary problems in the same way that she could prepare her lesson plans?
2. Suggest plans for the abolishment of cheating in a school where it is quite common.
3. To what extent can we hope for freedom through discipline?
4. Should efficient instruction be looked upon as the result of good order or as a means to good order?
5. Is there a difference in "creative work" and "busy work." Are primary children capable of doing creative work?
6. Make a list of factors that tend to make you do better work. Is this list largely reprimand or praise? Do you think this is true for most students?
7. Why are we tending to move so far away from corporal punishment in our present-day schools?
8. To what extent do methods of punishment in social control and self-control differ?
9. George's teacher realizes that geography is his least liked subject. Consequently because George plays "hooky" his teacher gives him six extra pages of geography to study. Is this an effective and an appropriate punishment for George?
10. It has been claimed that young people today have an increasing disrespect for authority. Is this true? Justify your thinking.
11. Make a list of the causes of poor discipline and suggest remedial measures for each cause.

12. Show how a knowledge of the instincts may be of help to a teacher in dealing with a boy who is constantly bullying the small boys on the playground.

13. Harry Emerson Fosdick said recently:

“Some people say that authority in the American home is breaking down. I do not think so. There is as much authority in the American home as ever, only the children exercise it!”

Is this true of the modern school also? Who should exercise the authority?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER VI

THE LEARNING PROCESS

"Now, boy," said he, "take me to the captain."

"Sir," said I, "upon my word I dare not."

"Oh," he sneered, "that's it! Take me in straight or I'll break your arm."

He gave it as he spoke a wrench that made me cry out.

"Sir," said I, "it is for yourself I mean. The captain is not what he used to be. He sits with a drawn cutlass. Another gentleman"—

"Come, now, march," interrupted he, and I never heard a voice so cruel, and cold, and ugly as that blind man's.¹

Let one who reads the above quotation stop and ask himself what kind of feelings he possesses toward the blind man described here, and he will conclude that whatever those feelings, they have been influenced by his past learnings.

One learns to be kind, selfish, altruistic, courteous, and honest. One learns to get along with his fellows, to be kind to the lower animals, to solve arithmetic problems, and even to speak the language he uses. What, then, is learning? What do we mean by the learning process? The older conception of learning was that in some way or other knowledge was stored up. The newer conception of learning is that it is a type of behavior. It is the process of connecting a stimulus to a response. Learning, then, depends on practice. The more often a certain stimulus and response are connected the more strongly the bond between them is developed, and hence the more probability there is that learning has occurred. Learning, then, is a matter of degree. If one is given the stimulus, 6 times 7, and responds "42," a connection has been formed between the stimulus and the re-

¹ Stevenson, Robert Louis, *Treasure Island*, The John C. Winston Company, 1924, page 28.

sponse. This connection may be very weak, however, so that it will soon be forgotten or it may by continuous practice be made so strong that one can recall it at any time. Some bonds are so strongly fixed between stimulus and response that an impulse traveling over the connecting neurones seems incapable of moving in the wrong direction. For example, the stimulus, what is your name, always appears to bring the correct response. Learning, then, is simply building bonds between stimulus and response.

This is the teacher's job. Her work should be judged by the success with which she accomplishes this, granted, of course, that only desirable bonds are established. In any discussion of bond forming between stimulus and response, it should be kept in mind that a bond is always formed between a stimulus and its response whether it is a desirable response or not. When a child is given the stimulus 6 times 7 and says "43," the connection is formed just as strongly as if he had said "42." It will be understood, also, that before the 6 times 7 equals 42 bond can be formed, the 6 times 7 equals 43 bond has to be weakened. A bond once formed, however, can probably never be obliterated. It may remain to plague us all of our lives. Consequently one of the greatest weaknesses in our teaching in the past has been permitting wrong bonds to be formed. As a result a considerable portion of the teaching time has been spent in the correction of wrong bonds instead of in forming or strengthening new desirable bonds.

A child was recently observed writing down the sevens in learning the multiplication table. One of the seven combinations, 7 times 8, was written as equaling 54. The newly written table was then drilled upon. Each time the combination 7 times 8 was used it was connected with 54. The result of the practice was to fasten so strongly the bond, 7 times 8 equals 54, that it is possible that this child may never be able to make the response, 7 times 8 equals 56 with certainty. A teacher should be constantly on her guard to prevent the formation of wrong bonds. When a word is spelled incorrectly, an undesirable bond

is formed. Somewhere along the line it will have to be corrected. When a child, in order to find 4 plus 3, gets the answer by counting from 4 to 7, an undesirable bond is formed. Every time an error is made in learning a poem, time must later be taken to correct the undesirable bond formed. Constantly, every moment in the day, the teacher must be on the alert to prevent the formation of wrong bonds. Many children come to school with the wrong bonds formed. In such cases whole-hearted endeavor, both on the part of the pupil and the teacher, is necessary for correction. It appears, then, that human nature can be changed, and that man is largely the result of his learning. Habits, knowledge, and ideals are the outcomes of learning. Good physical habits can be taught and immoral habits can be prevented. Undesirable destructive tendencies can be modified, and correct writing habits can be formed.

The Laws That Govern Learning. If we owe much of what we are to what we learn in life, it would appear that the laws which govern the learning process might comprise an important phase of the work of the psychologist. Keeping in mind that by learning we mean the formation or strengthening of desirable bonds, we find that apparently such learning is governed by three strategic laws. These three laws are the laws of exercise, readiness, and effect.

The law of exercise. By the law of exercise we mean that when a bond is formed by connecting a stimulus to a response the bond will at least tend to be strengthened by a continued exercise of this connection. In other words, the more times one says 6 times 7 equals 42, the more strongly he fastens 6 times 7 to 42. However, it should not be understood here that mere practice is all that is essential in learning. Practice without attention seems almost valueless and in fact may be positively dangerous. Pupil A may read a poem to pupil B and then to pupil C and then to pupil D, until each of the pupils has memorized the poem, and yet pupil A may not be able to reproduce the poem. If pupil A simply reads from the book and gives little if any attention to the content of the poem, the chances

are that he will not be able to quote it, no matter how many times he has practiced saying it. The effect of the law of exercise appears to depend upon three other laws that may be thought of as sublaws to the law of exercise.

1. THE LAW OF FREQUENCY. This law refers to the resultant effect of the repetitions. The cumulative effect of repetitions is not always the same. The first few repetitions of an act are thought to produce more effect on the connection than later repetitions. A study of this sublaw opens up a whole field of needed investigation in spaced practices. For example, how often in spelling a word should it be reviewed? In learning a poem, how often should one read it through before resting? In teaching the multiplication table, how much time should one permit to elapse between drills? What length of drill is best for the writing period? These and many other questions need careful study.

2. THE LAW OF RECENCY. This law refers to the weakening, through disuse, of a bond once formed. Everyone knows that an act recently performed is more readily recalled than one which is performed after a long period has elapsed. The effect of a "warming up" period is noticeable here. When a muscle has not been used it will work better after a few exercises. In the same way any attempt to measure the effect of disuse in a bond is also affected by a "warming up" period. Everyone has experienced the feeling of not wanting to work, but after working awhile he becomes deeply interested in the job. Probably in this connection the bond, like the muscle, has to be exercised before it reaches its highest stage of efficiency.

3. THE LAW OF INTENSITY. By intensity we mean that a bond is strengthened more through intense exercise than through weak exercise. The reader will doubtless recall instances that occurred in his early childhood, probably only once, and yet they are as vivid as incidents that occurred just last night. In such cases it is not frequency, or recency, but the intensity of the act that makes the impression stick. This sublaw is an important one for the teacher. It means that vigorous drills for

short periods are more valuable than half-hearted drills over long periods. It means that with the attention riveted on a subject one will probably master more of it in five minutes than he will in twenty minutes with scattered, half-hearted attention. In other words, when you attempt to learn anything, work with all your might. It will pay big dividends.

The law of readiness. The law of readiness is usually defined in terms of neurological conditions. In brief, it may be stated thus: When the neurones are ready to act, action gives satisfaction; and when the neurones are not ready to act, action brings dissatisfaction. In other words, the nervous system is apparently so set at times that it is satisfying to throw certain neurones into activity, but annoying to throw others into activity. We have all watched the boy who is getting ready to go fishing. We know how little it takes to interest him in anything connected with the trip and how difficult it is to interest him in anything else. Apparently those neurones connected with fishing are ready, yes, more than ready to act, but all others are in no mood to be bothered. Nothing can be more annoying to a boy who is all set for fishing than to insist that he perform all sorts of tasks that have no bearing whatever on the trip. Teachers could afford to give considerable attention to this law. Getting a child "ready," "set" for a grammar lesson may be quite as important as the presentation of the lesson itself. The inner urges of every child ought to be surveyed if we want to be successful teachers.

The law of effect. The law of effect states that when a bond is formed between a stimulus and a response it is strengthened when the response is satisfying, and weakened when the response is accompanied or followed by a state of annoyance. In other words, successful reactions tend to stick while unsuccessful ones are apt to be forgotten. Such a law carries with it many lessons for the schoolroom. It offers every incentive to the teacher to make school work interesting. In short, it means that every correct response should be rewarded, for satisfaction tends to fasten the response and stimulus more securely to-

gether. At the same time it means that every incorrect response should have an annoyer attached, for unpleasantness tends to weaken a bond. Effect seems to influence learning in two ways. First, the feeling of satisfaction tends to make for a repetition of successful movements, and the feeling of dissatisfaction tends to put an end to unsuccessful ones, because of the establishment of certain standards. In the second place, the organism itself has a tendency to repeat the pleasant reactions and not to repeat the unpleasant reactions. It appears also that if the law of effect is to be most effective, the rewards and annoyers which are fastened must not be too far removed from the time of the act, especially in teaching younger children. Consequently, an error in Latin should usually be corrected at once. Immediate punishment when lessons are not prepared is likely to be more effective than ultimate punishment.

The laws of learning do not necessarily answer the question of why one learns as he does, why a connection has a tendency to stick when the reaction is pleasant and not to stick when the reaction is unpleasant. Probably we can come no nearer answering this question than by saying that most of our activities are conditioned by wants. The big driving forces through life are simply the wants of mankind. A want has been described as stirred-up energy or a tendency to make a certain response. Whatever may be the motive of the want, it undoubtedly determines whether a particular response will bring annoyance or satisfaction. Wants may be either original or derived. The original wants are those based on instincts, and the derived wants are those that are satisfied through values that we have learned to appreciate. Our wants for money, power, religion, and good government may be called derived wants, although it is a question whether these in the last analysis are not based on instincts. Our wants, or tendencies to collect, to inquire, to fight when angry, etc., may be called original wants. Necessarily, the intensity of our wants may be very strong or nearly zero. Our want for money, for instance, fluctuates upward as the things money will buy increase. When money will buy

religion, protection, and a wife, our want for money increases. There can be no doubt that the wants of children vitally affect our teaching. It is not needs but wants that dominate most of our acts. It is the teacher's business to direct these wants and as nearly as possible make the children want what they should have. Only by such means will effective teaching be done. Wants we always have with us, but the danger is that they may be the undesirable kind. The test of the teacher is this: Can she make children want arithmetic as well as pinwheels? Can she cultivate a want for grammar as well as for air-planes, or for a high type of literature as well as for a low grade?

When Has a Thing Been Learned? From what has been said it will be remembered that a thing has been learned when a connection has been formed between the stimulus and the response. The connection, however, may be of all degrees of strength. The stimulus and response may be so closely connected that the instant the stimulus is given the response appears, or they may be so loosely connected that the response can be recalled only with the greatest difficulty. Sometimes immediate recall is all that is necessary and in such cases if the stimulus calls up the response for only a short time after its association we would say the thing has been learned. If, however, ultimate recall is necessary, the bond connecting the stimulus and response must be greatly strengthened or we cannot recall it when needed, and in such cases we would say that the thing has not been learned. In the minds of most people, then, a thing has been learned when it can be recalled. This law has led to much writing on the memory and how to improve it.

Recently students of education have been inclined to say that a thing has not been learned until it can and will be used when needed. From this point of view one who can merely remember how to be honest is not honest unless he really practices those acts that constitute honesty. A boy has not learned his lesson in health unless he actually does carry out the acts that make for

health. In other words, there is more to being a Christian than being able to quote the Christian precepts, and to being healthy than knowing the health rules. The authors like this point of view. Learning ought to be thought of in a broader way than merely as stored up knowledge that can be recalled.

Characteristics of the Learning Process. If one wishes to know what the characteristics of the learning process are, let him try to learn something entirely new, plot his accomplishments for the various attempts, and then study the result. Mirror writing is often used to illustrate this. For most people,

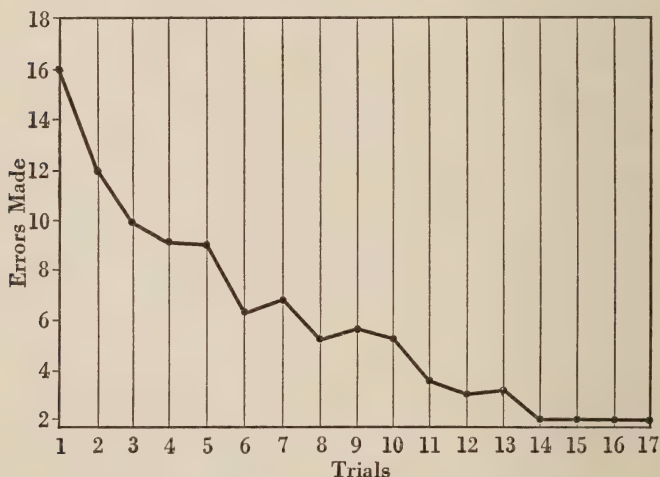


Figure 1.—Showing progress in tracing a twelve-pointed star while looking in a mirror.

learning to write by looking in a mirror is an entirely new activity. In doing it we get a little of the feeling that the child possesses in learning new things. The following experiment is suggestive: Make several twelve-pointed stars of exactly the same size. Trace the stars with a lead pencil by looking in a mirror in such a way that the star being traced can be seen only in the mirror. Each time you trace the star count the errors you make. An error is made every time you deviate from the

line on either side. A good way to count errors is to count the sharp points off the curve which one makes in an attempt to get back on the line. After making twelve or fifteen attempts at star tracing, take a sheet of graph paper and plot the result. On the horizontal line make as many spaces as you have made tracings. On the vertical lines indicate the number of errors made at each trial. Then by a smooth curve connect all the points you have made on the vertical lines. Your drawing should look something like Figure 1, page 126.

The curve represented in the preceding figure is typical of learning curves. A careful study of it indicates the following characteristics:

Rapid progress at first. The rapid drop of our curve at the start indicates that the first few attempts bring rapid learning, or, in the case of mirror learning, a rapid decrease in errors made during the first few attempts. This is typical of all learning curves which are not of the problem solving type. Several reasons have been advanced for this rapid rise at first:

1. The first steps in learning a new type of material can be mastered easily because of their simplicity. This is particularly true in learning to typewrite.

2. In the beginning of the learning process one is doubtless already in possession of many of the necessary elements of knowledge and thus finds them available for use. These aid rapid progress because time does not have to be spent in learning them.

3. There are great opportunities for gain at first. In beginning to learn one has the whole field before him in which to make improvement. Later, however, the field may be so narrowed as to preclude very considerable opportunities for learning.

4. The novelty of the situation. As has already been said, the newness of a subject is itself sufficient to make us enter the initial trials with eagerness, and it is likely to result in rapid gains.

Fluctuations. Fluctuations are sudden up and down deviations from the general direction of the curve. Almost all learning curves show that successive trials do not show equal amounts of improvement; indeed some trials may show no improvement and may actually show a loss. In the drawing pictured in Figure 1, page 126 a loss actually occurred in trials 7, 9, and 13. There are many factors that may cause fluctuations in learning curves. A lapse or let-down in attention during one trial may cause a negative gain; outside distractions are influential; the subjective feelings of the individual may color the results; and finally the desire to succeed is an influential factor. Whatever may be the cause one should not be discouraged by fluctuations in his learning progress for they are almost always present.

Plateaus. When no improvement or loss is recorded over a number of successive trials one will find a level or flat place on his learning curve. Such places are called plateaus and they always indicate that for some reason no progress is being made in so far as the curve shows. Psychologists are not in absolute agreement as to whether plateaus can be avoided or not. The preponderance of opinion is that they are not necessary accompaniments of the learning process. Bryan and Harter found them occurring in approximately three-fourths of their subjects, but other writers have not found them occurring so frequently. It is a fact, though, that plateaus do usually occur. One should not infer from this, however, that they cannot be prevented. The possibility of preventing them depends very largely on their causes. The following have been advanced as probable causes:

1. A LAG IN ENERGY. It is, of course, quite probable that the energy one puts into his work is not the same at all times. When energy flags, accomplishments are almost sure to flag also. It may be impossible, however, to keep our energy from fluctuating.

2. A FORMATION OF A HIGHER COMPLEXITY OF HABITS. In learning the process of typewriting one may find after a certain stage that he is making no progress. His learning curve indi-

icates a plateau. What may be happening is this: The simple process of hitting the keys has reached a point where it must be combined into a higher complexity of habits before further progress can be made. The development of these simple elements of knowledge into a higher combination requires time and practice. If such be the case one is really making progress, but it is not indicated on the learning curve. The progress made is in the formation of a higher habit, probably a work habit, and will be shown in the sudden upward fluctuation of our learning curve a little later. In this connection Bryan and Harter comment as follows: "A hierarchy of habits may be described in this way: (1) There are certain habits which are elementary constituents of all the habits within the hierarchy. (2) There are habits of higher order which, embracing the lower as elements, are themselves in turn elements of higher habits, and so on. (3) A habit of any order, when thoroughly acquired, has physiological, and, if conscious, psychological unity. The habits of lower order which are its elements tend to lose themselves in it, and it tends to lose itself in the habits of higher order when it appears as an element therein. . . . A plateau in a curve means that the lower order habits are approaching their maximum development, but are not yet sufficiently automatic to leave the attention free to attack the higher-order habits. The length of the plateau is a measure of the difficulty of making the lower-order habits sufficiently automatic." ¹

W. F. Book in his study, *The Psychology of Skill*, indicates that plateaus have their explanation in psychological rather than physiological causes. In his opinion the plateaus simply indicate that the energy with which interest and effort are applied is lessened, or that effort is wrongly applied. In other words, Book believes that "the learner is simply caught by the law of habit and fails to improve because new adaptations or 'short cuts' in method cannot be made unless attention is kept vigorously and properly applied to the work."

¹ Bryan, W. L., and Harter, N., *Psychological Review*, Volume 6, pages 348-375.

3. **FAILURE TO COVER BACK WORK.** Every teacher has experienced in her teaching the feeling that the class is not making progress. Probably the work went well at the beginning, but in a little while there was a slump, a period of no progress. Frequently in such cases the class has simply failed to learn the back work thoroughly. There is nothing to do in such cases but to turn back and go over it. In many instances when there is a slackening of interest or a lagging of attention the cause lies in the fact that the work covered was not successfully done.

4. **THE NOVELTY DOES NOT CONTINUE.** Everyone is aware of the eagerness with which new jobs are often begun. The instinct of curiosity prompts us to want to see what it is like. After a time, however, the newness of the thing wears off and we find that we are letting down. This may often be the reason why classes which are eager to begin certain subjects fail to make progress later. In such cases the teacher should vary the method of procedure and in every way possible keep the novelty feeling attached to the subject.

5. **THE PHYSIOLOGICAL LIMIT.** In skills, progress cannot go on indefinitely with the same rate of improvement that was made at the beginning. There may come a time when the impulse will not travel over the neurones any faster. In such a case an individual is said to have reached his physiological limit. When this point is reached our learning curve will show a plateau which theoretically at least must continue. It will be the final permanent limit of progress.

Apparently, then, all typical learning curves have at least three characteristics: A rapid rise at first, up and down fluctuations, and temporary periods of no progress or plateaus.

The forgetting curve shows a rapid drop at first and then a gradual decrease in the amount of forgetting as time goes on. It is quite probable that one may forget more of certain types of material in one week after learning than he will in three or four weeks at a later period. If this be true it would seem unwise to allow several short school vacations, as is customary in most school systems.

Influential Factors in the Progress of Learning. There are many factors operative in learning progress which it may be of considerable value to keep in mind. As has been explained, one tends to forget a thing as soon as he has learned it unless he makes use of it later at intervals. All of us have been able to spell a word, and later found ourselves embarrassed because we had forgotten it. The tendency to forget can be checked to a very great extent by a proper distribution of reviews. This brings us, then, to the first of a number of influential factors in learning progress.

The distribution of practice periods. This factor is not only operative in reviewing in order to maintain the progress in learning already made, but also in the learning periods themselves. It has been claimed that every type of learning probably has a best length of time for practice as well as a best frequency of review periods. Several studies have been made on this point. Luebo and Hyde ¹ tried transcribing English words into German script by the following plans:

1. Spent twenty minutes of time twice a day.
2. Spent twenty minutes every third day.
3. Spent twenty minutes every day.
4. Spent twenty minutes every other day.

They found that plan 1 produced the worst results, and plans 3 and 4 the best. Gates ² reports a study by Pyle in which four groups of students were used in an investigation of learning in "substitution"—a rather difficult function in which the letters of words are translated into other symbols by the use of a code." They all spent the same amount of time in practice, but one group practiced fifteen minutes per day, another thirty minutes, another forty-five, and another sixty. He found that the thirty-minute practice period yielded greater returns per unit of time than either the longer or shorter period. The sixty-minute period was the most unproductive. Other investigations

¹ Luebo, J. H., and Hyde, W., "An Experiment in Learning to Make Hand Movements," *Psychological Review*, Volume 12, pages 351-369.

² Gates, Arthur I., *Psychology for Students of Education*, The Macmillan Company, 1923, page 286.

have been made and all of them do not indicate the same results but almost all of them agree in this: If one has a comparatively long time at his disposal in which to learn a task, it is better to space the practice period in such a way that any one practice period does not last long enough to bring on inattention and fatigue, and to space the time between practice periods so that the gain in one practice period will not be lost before the next.

After a thing has once been learned, then the reviews should be distributed in such a way that the first review will occur a relatively short time after learning and later reviews spaced so that they will come at increasing intervals. For example, in reviewing a spelling lesson, it is better to review it the next day after learning, then one week later, then one month later, and then three months later, than it is to have the reviews on consecutive days. A similar procedure should be followed in retaining a poem that has been learned. No one knows yet, however, the best way of reviewing different types of materials. Perhaps one will find that individual differences exist on this point.

A second factor influencing the learning progress is the knowledge which the student has of his success or error. Book,¹ experimenting with 124 junior and senior students at Indiana University, divided them into a stimulus section and a control section. They were then given practice in four different types of learning.

In each type of learning the members of the stimulus section group were asked to count their scores after each practice. They were also made to feel that they could increase their scores in practically every practice and test. The members of the control section were kept ignorant of their scores, but they were urged to work as rapidly as they could. Later the two groups exchanged rôles, so that the stimulus group became the control group and the control group the stimulus group. It should be noticed that the stimulus group always knew its score and was

¹ Book, W. F., "The Will to Learn," *The Pedagogical Seminary*, Volume 29, Number 4, pages 306-362.

urged to improve it, but the control group was not aware of its score. Some of the conclusions from the experiment according to Book, are as follows:

1. The stimulus sections make more improvement with a given amount of practice than do the control groups. This is true for the groups taken as a whole and for the individual records taken separately.

2. The stimulus group which had been making rapid and continuous improvement ceased suddenly to show such gains when the incentives were removed.

3. The control group which had made but little progress began suddenly to improve when the incentives were given. (Knowledge of scores in this case.)

4. Fewer mistakes were made by the stimulus group than were made by the control group.

From Book's study, then, it appears that the "will to learn" has much to do with the success in the learning. The incentives that arouse the will, however, are not easily found. The following hints are suggestive in this respect:

1. As has already been suggested, let the learner see his score, if possible in facts and figures.

2. Develop the habit of using learning curves. These curves can be used in almost any subject when one can work out an objective method of measuring accomplishments. For example, in filling in block sentences in grammar, every child should plot his own curve of learning from day to day. His spelling scores can also be recorded on learning curves. Learning curves have the distinct advantage of urging a child to compete with his own record rather than that of another.

3. Take every opportunity to point out the rewards one is almost certain to receive for successful endeavor. In this connection, it will be helpful to read the lives of successful men.

Ross¹ reports an experiment in which he used four groups of students in an attempt to show the relation between knowledge of progress and achievement in one form of motor learning. The

¹ Ross, Clay Campbell, "An Experiment in Motivation," *The Journal of Educational Psychology*, Volume 18, May 1927, pages 337-346.

skill involved consisted in making groups of four vertical lines and crossing them with a fifth line. The subjects were all college students, twenty-eight freshmen and thirty-one upper-classmen. For experimentative purposes the students were grouped into three sections. One section was told its score from day to day, a second section had partial knowledge of its score, and a third section was told nothing at all about its progress. Each section carried out the practice period of ten successive days and then the sections were reversed, that is, the section that had not been given its score was told each day about its progress, while the other sections were not told, or partially told.

Ross's findings on the results of the practice periods for the first ten days were quite similar to Books' but when he reversed the sections he found that the section that had been told its score during the first ten practice periods continued to forge ahead thereafter even though it was kept ignorant of its scores.

Ross believes, therefore, when a group is stimulated to greater effort due to the knowledge of its score, that the incentive to study is not necessarily lost just because the stimulus is withdrawn. Certainly this is the way we would like to have it work out in our school work.

Imagery types. Some people can get impressions better through the visual sense, others through the auditory sense, and still others through the motor sense. This does not mean that a given individual can be classified only as of one of these types. It does mean, however, that when a person visualizes better than he listens, the wise teacher will appeal to the sense of sight at every opportunity. One can test his own sense of imagery by trying to picture in his mind the different images formed by the various senses and see which seems more distinct. For example, imagine yourself walking up a stairway and then try to picture a big red rose. Which seems plainer? Listen to the imagined yell at the football game and then try to think the feel of an apple. Which image is more distinct? A number of tests of this type would doubtless show with a great deal of accuracy at which type of imagery one is most adept.

The type of attention. Various writers have depicted three stages of attention. The first is passive attention. This is the type of attention given by the baby and the savage. It is the type of attention that will not stay put. The slightest impression will prove a distraction. In other words, the attention appears to wander where it will. Until one outgrows this phase he can never lay claim to being a student. Consequently most writers believe it is necessary for the individual to pass through a second stage called active attention. No one would recommend this stage as a steady diet. It is the type that burns the candle at both ends. Effort is required to hold the attention where we want it to go. As a period of training, however, it seems worthwhile sometimes to learn the technique of sustained attention. That is, there are times when one should say, "By all the power within me, this one thing I do, and I defy all the gods to distract me therefrom." Such an attitude should eventually put one on that plane called by some the secondary passive stage. This is the stage where attention will be given to the thing at hand just as easily as in the passive stage where it continually flitted from one thing to another. It is probably not an exaggeration to say that no one is entitled to the name, student, until he has reached this secondary passive stage of attention.

Undoubtedly the stage of attention one attains materially affects the learning progress.

The effect of method and attitude. A good way to test the effect of method on one's work is to try to learn a poem by parts, then by the whole, and then by the mixed method. Almost all investigations indicate that the whole method is superior to the part method and that the mixed method is better than either. There can be no doubt that the method of performing a task is directly related to the progress made. The progressive teacher should be conversant with the best literature on method in so far as it relates to her particular field.

The attitude one takes toward his work is also important. If one believes he will succeed, he actually will more nearly succeed. On the other hand the feeling that he cannot succeed

actually invites failure. For this reason one should plan his tasks in such a way that he always feels reasonably certain of success. Success is a splendid incentive for leading to still greater success. One is also more likely to become interested in his work and like it if he really insists that he is going to like it. To declare continually that you do not like a subject is an excellent way of not liking it and thus leading yourself to failure. Anyone, however, who is really trying to like a subject will find many ways to develop an interest in it. For example, try to introduce the play element in your study, try to beat your previous record, and read widely on the subject. You will find your efforts amply rewarded.

Transfer of Training. The older conception of training held that our ability to reason, discriminate, and observe were general faculties that could operate in any activity. It was thought that these faculties could be trained as a unit and that certain subjects such as Latin and mathematics were especially adapted to bring about such training.

At present, however, our conception of the transfer of training is quite different. It is believed today that if the mind is trained to operate in one field, it will probably operate in another field only to the extent that the elements are common to both fields. For example, if one knows how to solve the quadratic formula in algebra, it will make physics easier to learn only to the extent that the quadratic formula is used in solving the problems in physics. However, unless some of the algebraic elements learned in algebra appear in physics it is doubtful whether algebra will be of any aid in the physics course. Furthermore, there is no assurance of transfer even when identical elements do exist, unless the pupil is aware of their existence. Consequently, teachers should be on the alert to point out any similarities between subjects, or subjects and life situations.

Of course, identical elements should be interpreted as more than just identical content. They may include ideals, attitudes, or methods of attack.

The Thinking Process. Emerson has said that "thinking is the hardest thing in the world. It is also the thing which gives us the most ease by enabling us to perform our tasks with the least amount of labor. It is a wonder that so few people make it their business." Thinking is not only a distinct type of learning but it is the highest form of learning that the human mind has yet achieved. It is a type of behavior and undoubtedly it is a type which not only saves time but often makes possible achievements that could never be attained by lower forms of learning such as blind trial and error or imitation. For example, if one is asked to find out how many one-inch blocks will fit into a certain space, he could find the answer in two ways. One way is actually to work it out by putting down enough little blocks to fill the space. The other way is simply to find the number needed by using the measurements of the large space. Both are types of behavior but the method of getting it by thinking saves far more time. Thinking, then, seems to have the following advantages: (1) It saves time. (2) It saves material. (3) It makes higher attainments possible.

A high school pupil was interested in making a medicine cabinet to fit in a certain position in his home. He worked arduously in getting his material together, and cutting his boards, but when the cabinet was almost completed he discovered that he had not taken the measurements of the corner into which he wanted the cabinet to fit. The result was a medicine cabinet which was too large. There was nothing to do but make another cabinet. Not only was much time and energy lost, but material was destroyed, and enthusiasm for the project was greatly reduced.

How can pupils be stimulated to think? All authorities agree that there is no more important function the school can render than to send its pupils out capable of thinking. Thinking, however, does not develop of its own accord. To learn anything we must somehow practice that thing. This applies to thinking as well as to other things. Children in school must practice thinking or they will never become thinkers. Many suggestions could be

offered for developing one's capacity for thinking but in this brief discussion we shall have space only to mention the following three:

1. **BY PRESENTING CHALLENGING PROBLEMS.** There has probably been no better method for developing thinking than by the so-called project method. When a child launches out on a project that he really feels is his very own, the chances are very strong that he will do real thinking before he has completed the job. For example, suppose a high school pupil in general science wants to know whether the water supply at his home is pure or impure. Here is a problem that will challenge his thinking. He will discover some use for his chemistry, physics, probably biology and perhaps his mathematics. If he really accepts it with purpose (an essential characteristic of all projects) one will find him weighing his data like a regular scientist. Possibly we are not yet ready to undertake wholesale teaching by the project method but we can all get away from the parrot-like method of reproducing the textbook. Any teacher with originality can guide pupils into channels where many problems will arise. Where there are no complexities or difficulties from which to extricate one's self, there will be no thinking. Thinking, arises from attempting to cope with a difficulty.

2. **QUESTIONS AS A MEANS OF STIMULATING THINKING.** The question is an excellent device for stimulating thinking, if the question is of the right kind. Too often, however, questions are asked so rapidly that no pupil has time to think about an answer to one question until he is asked another. Teachers have been known to average three questions per minute throughout the recitation. Another common fault in questioning is the habit of asking questions that simply call for a reproduction of the text. This is particularly true of weak teachers. To aid in better questioning the following points are suggested as essential characteristics of a good question:

a. Questions should be framed in the teacher's own words. To ask a question in the exact language of the book where the question is answered does not stimulate one to think. There is

not enough challenge about it since one can glance at the book and find the answer.

b. Questions should be stated so clearly that only one meaning is possible. For example, the question, "Why did the United States enter the World War in 1917?" might mean why we entered the war at all or only why we entered in the particular year 1917. The question, "Why should no person drink water without being boiled?" carries with it more than one probable answer. The question, "Should you meet a horse tramping through the snow in your rubber boots, what would you do?" is of the same type.

c. In formulating questions use words that the children understand. No one knows how many times children have said, "I do not know" in answer to a question, when as a matter of fact the thing they did not know was the language in which the question was couched. For example, this question was asked a university student the other day, "Did Dewey have a catholicity of interests?" The answer was, "I do not know." Later the pupil told the instructor that what he did not know was the meaning of the word catholicity.

d. Questions should not be so long as to confuse the pupil. It may be permissible for lawyers to have a two- or three-page hypothetical question, but it is not good practice for teachers to do so.

e. Questions properly stated will not have to be restated or rephrased.

f. Good questions will demand more thinking than those requiring mere assent or denial.

3. UTILIZING THE IMAGINATION IN THINKING. It is the opinion of the authors that far too little attention has been given in school to imaginary thinking. Too often it has actually been discouraged. Yet the ability to do imaginative thinking is a valuable asset. He who is able to build air castles can get a lot of pleasure out of life without much cost. One may not be able to afford an airplane but he can remain on the ground and imagine what a ride in it would be like, and enjoy it almost as

much as if he were actually riding in his own plane. The following problems will help to stimulate imaginative thinking:

a. Name three entirely new inventions that will be in use fifty years from now.

b. Write all the words you can think of that mean the same thing as difficult, or elastic.

c. Which is the more, six dozen dozen or a half dozen dozen?

d. Give the pupils a number of letters and see how many words they can build with them.

e. Complete mutilated sentences.

f. Note the title of a book. From it imagine what the author will write and then read the book.

4. STEPS IN THE THINKING PROCESS. Thinking occurs only when there are problems and difficulties to be solved. Since thinking is hard work it is only natural that we will not think except when we want to settle a difficulty. Pupils should be taught that thinking can be analyzed and a tendency to think can be built up. The following steps seem clear in that type of thinking we call inductive thinking.

a. There must be presented a difficulty, problem, or project for solution.

b. There must be some inner urge that causes the individual to do something about it. It must be the individual's problem.

c. The necessary data for solving the problem must be collected. From this it would appear to be manifestly absurd to tell a pupil to think unless he has the necessary data or tools with which to think.

d. The data must be systematized and composed so that conclusions can be drawn.

e. Draw the conclusions or generalizations.

f. Test the conclusions or generalizations. If the test shows the conclusions to be wrong, other conclusions must be drawn and tested accordingly.

A teacher can give the pupils problems and have them analyzed to see the steps in the thinking process. In fact, the experience of any child will furnish abundant examples for

such work. After one is well aware of the necessary steps in the thinking process he will be in a better position to do thinking when he faces new situations.

QUESTIONS AND EXERCISES

1. In beginning to write would it be a good thing to have the children practice by tracing the letters in the air? Why?
2. List experiences in your own life where loss of interest and fatigue interfered with your improvement in learning.
3. Try to list ten experiences you still remember because of the intensity of the experience.
4. What kind of an annoyer would you use for a boy who had copied another's theme and had handed it in as his own?
5. In what respect is learning a way of behaving?
6. What is the difference between a plateau and a fluctuation? How can one know when he has reached his physiological limit for any particular act?
7. What should a teacher do when her class definitely strikes a plateau in reading?
8. Can you recall any illustrations where the "will to learn" was an important factor in bringing success?
9. Can a child who is audile minded learn to spell a word by looking at it and then looking off to see whether he can see it?
10. Should a teacher purposely throw problems in a child's way to make him think? Explain.
11. When you find yourself in a situation where you have to think your way through, does it seem to you that you follow the steps in the thinking process as listed in this chapter?
12. Give illustrations where annoyers have been an aid in breaking an undesirable bond. Do you think the best annoyers were used in each case?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER VII

INDIVIDUAL DIFFERENCES

The most invariable of all laws in biology is the law of variation. The old theory that "like begets like" is correct if we add the statement, "but not just like." Children are not born into the world equal physically, morally, mentally, or spiritually. Not only are they not born equal but they can never be made equal. For this reason the school that wishes to do efficient work must not attempt to make the children equal, and moreover it must not treat them as though they were equal.

One of the most wasteful activities in our schools today is the attempt to deal with children en masse. Education is an individual process. A careful perusal of the psychological trends today seems to bring us to three educational principles suggested in the *Twenty-fourth Yearbook of the National Society for the Study of Education*.¹ These three principles are as follows:

1. No group has yet been found in which the individuals composing it possess equal amounts of any one ability.
2. Performances vary so greatly as to indicate that no single requirement is adequate as a stimulus to a majority of the group.
3. To study the development of a learning process it is absurd to set up as a standard a definite quantity of performance and expect each member of the group to accomplish just that amount and no other.

Our schools should discover the manner in which children differ and then, instead of trying to break down these differences, they should endeavor to develop them. Efficient methods of teaching will tend to make differences greater rather than less.

¹ *The Twenty-fourth Yearbook of the National Society for the Study of Education*, 1925, Part II, Public School Publishing Company, page 6.

The problem of individual differences and how to meet them has become acute. As long as we did not have compulsory school laws the problem of individual differences was not a serious matter, for as soon as children found themselves unfitted to the school régime they dropped out of school. With our compulsory school laws, however, this cannot be done. In most states children must stay in school until fourteen years of age or more. This results in many misfits. School systems today in many instances are striving hard to arrange the school régime in such a way as to make it possible for each individual to profit to his full capacity. In many cases this has involved a reorganization of the administrative work and in some instances a complete reformation of the curriculum.

In a discussion of individual differences it should be kept in mind that while we often speak of classes of pupils, in reality they do not fall into distinct classes. For example, we speak of the idiot, the imbecile, the moron, as though there were three distinct classes. As a matter of fact, no one knows where the lines of demarcation between the groups are. A careful measurement of the heights of an unselected group of individuals will show that they differ so imperceptibly from each other that the heights arrange themselves in what is called a normal curve of distribution. That is, a very slight difference will be found to exist between any two individuals occupying successive stages on the curve. The lengths of forearms of unselected groups of individuals, the perimeters of their heads, the distances around their wrists, and other physical measurements all tend to shape themselves according to the normal curve of distribution.

A similar distribution occurs in mental differences. Instead, then, of having one class of children of such low grade mentality that they may all be called idiots, imbeciles, or morons, it is more accurate to think of them as varying from one to the other by the slightest amount. A graphic presentation of the mentalities of an unselected group will show the normal curve of distribution just as much as the physical measurements will. This

slight variation among children makes the problem of meeting individual differences all the more difficult. If children actually fell into three or four or five different classes mentally it would be a comparatively easy matter to meet the demands of these different classes, but whenever a child differs from every other it is a very difficult matter to work out school systems which will enable every child to live up to his full capacity.

In our discussion of individual differences let us consider the causes of individual differences, the manner of the differences, the amounts of these differences, and then turn to a brief discussion of how these differences may be met.

Causes of Individual Differences. All causes of individual differences, of course, can be traced to two major sources, namely, biological heredity and social heredity.

Biological heredity. By biological heredity we mean those qualities and traits that an individual inherits from his ancestors through the germ plasm. By social heredity is meant those traits, habits, customs, and characteristics which he inherits from society. Social inheritance occurs after birth but it is just as truly inheritance as biological inheritance since in neither case can the individual escape it. The one must always be received through the germ plasm; the other is always received as a part of the social environment. Whole volumes have been written about the relative values of these two types of heredity. Some would claim that practically all the differences in individuals are due to biological heredity, while others maintain with equal vigor that they are due to social heredity. Undoubtedly both types of heredity have a tremendous influence as determining factors in any individual's life and probably the extremist of either point of view is wrong and somewhere between the two points of view is a balance that more nearly expresses the actual situation. The fact that neither biological heredity nor social heredity is found in isolated form leads one to believe that if they be treated as interacting and reacting processes they will be less confusing. Biological heredity may be thought of from the standpoint of:

1. RACIAL DIFFERENCES. Everybody knows that there are great physical and mental differences among races. It is not at all impossible to identify through psychic reactions the race to which some individuals belong. Whether this difference is so ingrained that one is justified in believing that some races are marked for a certain social destiny, or whether a great part of such differences is due to social environment and to the fact that nature herself has set no specific position for a certain race to occupy, is a much mooted question. It is definitely known that social history is responsible for many of the differences between races. It is reasonable to suppose that the Jew's distaste for farming is due to his past history; that the thriftlessness of the Irish peasant is due to rack-renting; that the Dutch, having lived close to water, have a desire to keep clean, and that the Italians, having had to carry water up the hills, use it sparingly. As has been pointed out by other writers,¹ however, certain psychic differences that may be due to biological heredity seem to exist between races. Otherwise how can one explain the Jew's thirst for making money, the south Italian's tendency to murder, or the Gypsy's desire for wandering? One finds the Scandinavian sluggish in imagination and the Irish strong in imagination. The Scandinavian, consequently, is usually a poor after-dinner speaker but the Irishman is sought for such purposes. The Scandinavian is not a good salesman; the Irishman is very adept at salesmanship.

The psychic differences in races due to biological heredity are thought by some to be both quantitative and qualitative. Some investigations appear to justify this conclusion. One can scarcely find an investigation in which the negro race reaches or surpasses the median school mark of the whites. Most authorities estimate that negro children are only about three-fourths as efficient as white children of the same age and grade. Mr. Lacy² tested the intelligence of one hundred repeaters by the Binet

¹ Ross, E. A., *Principles of Sociology*, The Century Company, 1920, page 60.

² Lacy, W. I., "A Study of One Hundred Retarded Fourth Grade Pupils Tested by the Binet Scale," *Psychological Clinic*, Volume 12, pages 16-24.

Test. At each age he found the intelligence quotient of the whites higher than that of the negroes. During the war the army tests were given to thousands of soldiers, both whites and blacks. The Alpha Test was an army test that was widely used. It was given to the boys who could read and write. The Beta tests were those given to illiterates. In both of these tests the negroes seemed less intelligent than the whites. The whites in the draft made a median score of 59 on the Alpha Test and 43 on the Beta Test, while the negro northerner made 39 on the Alpha Test and 33 on the Beta Test and the negro southerner made 12 on the Alpha Test and 20 on the Beta Test.

It appears, from investigations already made, that there may be some quantitative differences between races. This is by no means proved, however. That different races perform differently on the tests may be due to social heredity instead of biological heredity. There is no test available today that tests native capacity in the sense that it is independent of social environment. It is a well-known fact that negro children do not have a fair chance socially with the whites, and before one can be sure that the differences shown above are not partly or wholly due to environment, many more carefully prepared investigations must be made.

Some writers think that races differ not so much quantitatively as qualitatively. They think the negro is better adapted for concrete problems but less adapted for abstract work. Some think that racial differences may be found in abilities to memorize and in drawing conclusions from difficult situations. So far as has yet been shown, however, there is no very strong proof of these qualitative differences.

It would be of tremendous importance to society if we could know the extent to which races do differ mentally. Our immigration laws, as they exist at present have been enacted largely on prejudice and opinion. Everybody knows that if immigrants come to America faster than they can be assimilated our country will be endangered, but whether races differ in their power of assimilation no one knows.

2. **INDIVIDUAL DIFFERENCES.** Individuals within a race show great differences both physically and mentally. Much study has been given to both the physical and the mental differences of school children. Some of the findings from a study of the physical development of school children are as follows: ¹

For boys the rate of growth in height is relatively high (average per year, 5.4 per cent) from age 5.5 to age 8.5, is relatively low (average per year, 3.25 per cent) from age 8.5 to age 12.5, and is relatively high again (average per year, 4 per cent) from age 12.5 to age 16.5, where the limit of average height for adults (about 68 inches) is approached. For boys the rate of growth in weight is relatively high (average per year, 9.8 per cent) from age 6.5 to age 8.5, is relatively low (average per year, 8.95 per cent) from age 8.5 to age 12.5. For girls the rate of growth in height remains relatively constant from age 7.5 to age 13.5 where the average adult limit begins to be approached. For girls the rate of growth in weight is relatively high (average per year, 10 per cent) from age 6.5 to age 8.5, is relatively low (average per year, 9.5 per cent) from age 8.5 to age 10.5, and is relatively high (average per year, 12 per cent) from age 10.5 to age 14.5.

Considerable evidence is available also on the organic development of boys and girls at different ages. One of the authors has often asked his class whether they believe big people are brighter than small ones or vice versa. The supposition that the smaller individuals are the brighter is quite commonly held. This conclusion is probably based on the fact that small people are usually older than they look and impress one as being brighter than they are. In fact, investigations tend strongly to show that precocious children are heavier and dull children lighter in weight than the average child of the same age. Most writers find that bright children are both taller and heavier than dull children. While these facts are not definitely established, it seems quite evident that differences in the physical size of school children bear at least a positive correlation to their mental age.

More study has been given to mental differences of school children than to their physical differences. Just at present,

¹ Inglis, Alexander, *Principles of Secondary Education*, Houghton Mifflin Company, 1918, pages 8-9.

however, our conception of the mental traits is being somewhat changed. Most of us have heard the statement "Once feeble-minded, always feeble-minded" and many teachers have held the point of view that since the school could do nothing for the feeble-minded or low grade individual anyway, why worry. It might be well to point out here that our whole conception of the intelligence quotient may be changed. Some recent experimental evidence indicates that the intelligence quotient of a child may be changed materially by the right type of environment and may be materially depressed by the wrong type of environment. Moreover, some feeble-minded individuals who are feeble-minded because of a lack of secretion of the thyroid gland have made material improvement in their intellectual capacities after receiving injections of thyroxin. If this be true, who knows but the time may come when other types of secretions may be injected into individuals and lift the intellectual level of all those who are below average.

Social heredity. Social heredity is an important factor in the development of the life of every individual. As has already been said, some persons go so far as to claim that environment may produce criminals and misfits regardless of the germ plasm from which they came. Others, however, go to the other extreme and believe that if one inherits the right carriers in the germ plasm he will make his environment conform to the right ideals or, if unable to do this, will climb out of this environment and move into another that is right for him. As we have said before, somewhere between these two extreme opinions on the influence of biological and social heredity is an opinion that is more nearly accurate than either of its extremes. That social heredity is a vital factor cannot be doubted by anyone who notes the differences in home and school environments. A child that comes from a home that has a good study light, a study table, and educated parents who are interested in the child's welfare, undoubtedly will show a higher social status than an other whose home life is exactly the opposite, provided that all the other factors are equal. The effect of the home life may be noted from the following incident.

At one time, when one of the authors was principal of a certain school, a teacher in the school sent a boy to the principal's office with the request that he be taken from her room. After some inquiry it was found that the teacher's chief complaint against the boy was that he did not prepare his work and did not learn his lessons. An investigation into the home life of this boy revealed the fact that he had a blind mother, an illiterate father who was a day laborer, and a home situation in which it was impossible to do high grade work. In other words, here was a boy in a home where he found it impossible to prepare his daily lessons, because of other children and poor working conditions. The teacher tried to measure the accomplishments of this boy by the measurements of another, whose home life was well-nigh ideal. Any tests given to boys with such contrasting home environments would doubtless show great differences in accomplishment, but who would be so bold as to say that the differences were due or even largely due to the germ plasms from which they came?

Not only are the home differences such as to make social heredity an important factor in child development, but school differences are also great. The average length of school term, 1919-20, varied from 109.6 days in South Carolina to 182.1 days in Rhode Island. The average daily attendance for every one hundred pupils enrolled in 1920 in the different states ranged from 60.4 in Oklahoma to 90.4 in Oregon. Differences expressed here are no greater than in the qualifications of teachers and in school conditions in general. The amount of money spent on education per school child in some states is many times greater than the money spent for the education per child in other states. City children invariably have great advantages over rural children. In the state of Kentucky a survey made recently shows how outstanding this difference is in the qualities that tend to make for good teaching. These differences may be seen from the following table: ¹

¹ Adams, Jesse E., "A Study in the Equalization of Educational Opportunities in Kentucky," *Bulletin of the University of Kentucky*, Volume 20, Number 9, 1928, page 62.

TABLE 7

QUALIFICATIONS AND EXPERIENCE OF COUNTY TEACHERS AND TEACHERS IN
CITY AND INDEPENDENT GRADED DISTRICTS

	TEACHERS IN COUNTY SYSTEM (7,046 CASES)	TEACHERS IN CITY AND INDEPENDENT GRADED SYSTEMS (3,150 CASES)
Average number of high school credits earned.....	12.9	15.5
Number of high school graduates in every hundred.....	55.5	82.2
Average weeks attended college or standard normal school.....	28.3	82.0
Average number of semester hours of credit earned in standard normal school or college.....	24.5	69.4
Average number of different higher institutions attended.....	1.5	4.2
Number in every hundred holding a two-year teacher training certificate	14.5	29.9
Number in every hundred holding a four-year teacher training certificate	7.1	27.5
Number in every hundred holding a college degree.....	6.3	28.0
Average number of years experience...	5.5	9.4

The inequalities in social environment may be apparent not only in home and school differences, but also in differences in social contacts. People in the mountainous region where travel is difficult make few social contacts and receive few stimuli that make for growth, while people in the more progressive regions, where travel is easier and money more plentiful, have many opportunities to make social contacts and to receive mental stimulation. All these differences socially have a tremendous effect on the development of the individual, and one of the hardest questions to answer is the relative importance of these social factors and the factors of biological heredity.

How Children Differ.—*Age differences.* One difference which teachers will note among children in schools is a difference in age. Now, there have come to be many different ages spoken of in a discussion of our educational problem. A child has a pedagogical age, a physiological age, a mental age, an anatomical

age, an emotional age, a social age, and a chronological age. A teacher can well afford to give careful study to all these ages of her pupils and especially to their differences in chronological age. For the most part a teacher will not be far wrong in assuming that fifty per cent of her pupils in the first grade should be six years of age and fifty per cent of them seven years of age. Fifty per cent of those in the second grade should be seven years of age and fifty per cent eight years of age; fifty per cent of those in the third should be eight years of age, and fifty per cent nine years of age. An interesting problem for a teacher in any school would be to ask herself what the chronological ages of her children in any particular grade are. One investigation showed that the thirteen-year-old children in the school systems of six cities were found in the following classes: Two-tenths per cent were in the first grade, .8 per cent were in the second grade, 2.8 per cent were in the third grade, 6.7 per cent in the fourth grade, 13.2 per cent in the fifth grade, 21.5 per cent in the sixth grade, 27.5 per cent in the seventh grade, 19.8 per cent in the eighth grade, 6.4 per cent in the ninth grade, and .1 per cent in the tenth grade. Such differences indicate that there must be a large amount of retardation and acceleration in these schools.

Taking care of these age differences is one of the teacher's hard problems. One of the writers recalls how he was faced with such a problem in his early teaching career. In the first school which he taught there was a little boy thirteen years of age who, according to the record of the year before, was supposed to repeat the second grade. When it was discovered that he was reciting in the third and he had been informed that he was supposed to be reciting in the second, his reply was, "Yes, I know I am supposed to be in the second grade but I have taken the second grade three or four times and have decided to go into the third grade this year." The reply to this statement was a demand on the part of the teacher that the pupil recite in the second grade. In fact the pupil was forced to do so for a few days, but only for a few, because in a short time this thirteen-year-old boy quit school never to return. If the writer had this

problem to face again, he would handle the case quite differently. Instead of forcing the boy to recite in the second grade he would have promoted him to the fifth or sixth grade where he could be with boys more nearly his own age. This boy was one of the type who could learn little from his school studies, hence from this standpoint it would make little difference which grade he was in. He could, however, retain some self respect and probably develop some initiative from associating with fellows of his own age. While it is not often true, there seems to be good reason sometimes for a teacher to promote pupils purely on the basis of chronological age. There is considerable feeling today that every child has a right to a promotion every year. Doubtful cases should be promoted on probation. It often happens that a child that fails to do the work for one teacher will do the following year's work successfully for the next teacher. For that reason a number of cities have adopted the idea of probation promotion. This permits a child whose grade is doubtful to try next year's work on condition that after a reasonable time, if he is not doing the work successfully, he must drop back to the grade of the previous year. In a number of cities that have tried this scheme of promotion it is reported that two out of every three children who are promoted on probation do not go back and moreover, that two out of every three who have to repeat the work of the previous year get less out of it the second time than they did the first.

Sex differences. Are girls brighter than boys or *vice versa*? Literature on this subject falls into two classes, literature of fact and literature of opinion. Literature of opinion, chiefly in the past, has almost always credited the male species with being brighter than the female species. One contributing factor to this point of view was the knowledge that male brains are almost always heavier than female brains, and it was supposed that there was a close correlation between brain weight and intelligence. However, because of the writings of Dr. E. L. Thorndike, Helen Thompson, and others, we are getting away from opinion and substituting the facts instead.

After reviewing the literature in the field on intellectual differences between the sexes, Winsor draws the following conclusions:¹

1. Where a large population of a given age has been tested the difference in variability is practically negligible.

2. Males have been found to be more variable when some characteristics or types of performance are measured and females have been found to be more variable when other characteristics or types of performance have been measured.

3. Reported differences in variability might have been due to peculiarities of formula or selection of formula for determining variability. Measures of gross variability have often shown one result while measures of relative variability have shown the reverse result.

4. Mean difficulties in the abilities of the sexes in various kinds of performance seem to have been the determining factors when the coefficient of variation was used as the measure of variability. Since girls scored higher than boys in most of the tests used in studies of variability, this formula anomaly has made it appear that boys were more variable.

5. Where total range is used as a measure of variability the females show a spread equal to that of males. No justification for the occasional practice of referring to the "law of greater male variability" as assurance of the trustworthiness of data has been found, neither does there appear to be justification for the "restrictions of women to the mediocre grades of ability" because of the greater variability of men.

Other writers seem to find that girls are better in rote memory and language subjects, while boys are more proficient along mechanical lines and reasoning problems. Such sex differences, however, are not by any means proved, and much work is yet to be done in this field before one can write very authoritatively on mental differences between the sexes. At present some careful research work is needed on this subject with a view to determining whether boys and girls do better work in the same class or when segregated. It is probably true that under certain conditions, segregated classes in high school do better work than

¹ Winsor, A. Leon, "The Relative Variability of Boys and Girls," *Journal of Educational Psychology*, Volume 18, May 1927, page 334.

coeducational classes. A boy whose voice is going through a change, whose limbs are growing rapidly and who has a feeling of awkwardness will not perform as well as he is capable of doing in a class where girls are present. While such subjects as change of voice and physical awkwardness are perhaps classed as physical manifestations, they nevertheless have a direct bearing upon the mental reactions.

Interests, tastes, and aptitudes. That children differ in interests, likes, and aptitudes is self-evident. Some children show strong inclinations for one type of activity, others for another. Some find mathematics their most interesting and fascinating subject, others like it least. Some pupils enter high school with the expectation of entering college, others have no college ambitions whatever. A survey of more than six thousand high school seniors in Indiana, made by Dr. W. F. Book¹ shows many of the low grade as well as the high grade pupils entering college. This survey² indicated that the brightest pupils anticipate entering into a study of science, theology, and journalism, while the lowest grade group aspire to a study of medicine, business, and farming. No one knows the extent to which their ideals will be realized. It is evident, however, that for the greatest efficiency, the best teacher must as accurately as possible discover what the particular interests and aptitudes of each pupil are and then utilize them.

The interests and likes of the pupils have a great deal to do with the type of work they will do, and consequently will directly affect their success or failure in high school. A study made by Adams³ indicated that 61.8 per cent of all failures in high school are found in the first year, while 28.6 per cent are found in the second year. The reasons which these pupils give for their failures are as follows:

¹ Book, W. F., *The Intelligence of High School Seniors*, The Macmillan Company, 1922, page 36.

² *Ibid.*, page 280.

³ Adams, Jesse E., "Reactions of High School Pupils to High School Subjects," *School Review*, Volume 35, 1927, page 358.

REASONS	IN NON-VOCATION- AL* SCHOOLS	IN VOCATIONAL† SCHOOLS
1. Subject too difficult	28.7	31.5
2. Did not like teacher	15.5	14.4
3. Subject matter of little value . .	18.8	11.1
4. Failed to do back work	37.0	43.0

* Number of failures: boys, 527; girls, 468; total, 995.

† Number of failures: boys, 518; girls, 408; total, 926.

A study of these data will reveal that a dislike for the teacher and a feeling that the subject matter is of little value figures quite liberally in the reasons for failure. It is very probably true also that a failure to master the back work is often due to lack of interest in the subject.

Moral attitudes. Children differ materially in their moral attitudes. Doubtless the origin of these differences are both biological and social. Social workers find that many children come from homes where fine moral distinctions are not inculcated at all. When these children enter the schoolroom the teacher finds her job is materially increased. To the extent to which the home fails to inculcate moral ideals the school must take them up. One of the most recent studies in a particular field of morals in school children, namely, the extent to which cheating is carried on, was made by Hartshorne and May of Columbia University.¹ In this experiment, tests in cheating were given to 10,865 children. The type of tests given may be seen from the following:

1. A number of small circles drawn within a large circle were put before the children. Each child was asked to close his eyes and make dots with a lead pencil, striking the little circles as often as possible. Too many hits in the little circles were evidence of cheating.

2. Vocabulary tests were given the children to take home. Later another vocabulary test of the same difficulty was given at school. If a child could make a much better score when he took the test home than while at school there was evidence

¹ Hartshorne, Hugh, and May, Mark A., *Studies in the Nature of Character*, The Macmillan Company, 1928, Volume 1, pages 408-412.

that he had cheated. Other tests were given whereby the extent of cheating was revealed. The substance of some of the results that were found in this experiment may be noted below:

1. The older pupils in any given school group are slightly more deceptive than the younger children.

2. Sex seems to make no difference, although in home situations the girls usually cheat more than boys.

3. Honesty is positively related to intelligence. The child who scores above the average for his age in intelligence will, other things being equal, score below the average for his age in deception.

4. Children who show symptoms of emotional instability or maladjustment are more likely to deceive than those with fewer such symptoms.

5. Deceit is definitely associated with the economic level of the home. Children whose fathers are engaged in occupations yielding higher incomes are less deceptive than children of day laborers.

6. Deception runs in families to about the same extent as eye color, length of forearm, and other inherited structures.

7. Children who are over age for their grade tend to cheat more than those who are under the average age for their grade.

8. Those who get high marks cheat slightly less than those who get low marks.

9. Children who attend movies more than once a week tend to cheat slightly more than children who attend occasionally but less than once a week.

10. There is less cheating when the relations between teacher and pupils are free and cordial.

11. The progressive schools tested do not cheat as much as most of the conventional schools tested.

12. Children who attend Sunday school regularly cheat in day school about the same as those who rarely or never attend.

13. Children who belong to certain organizations purporting to teach honesty deceive about the same as (and in one case more than) children who do not belong.

14. Most children will deceive in certain situations and not in others.

15. The most common motive for cheating on classroom exercises is the desire to do well.

Emotional differences. It is becoming increasingly evident that our emotional make-up plays a far larger part in our judgments in life than we have been wont to believe. It also makes a

tremendous difference in the reaction of children to the situations in the schoolroom, and particularly their relations to the teacher. For example, let us look for a moment at the man who is partial to red hair. He attends a party, but if there are no people there with red hair he will probably come home and vow that the party was no good. If there is one or more red-haired person there, however, so that he can single her out for conversation, he goes home in high spirits ready to acclaim to the utmost the great time he had at the party. Now the difference was not due to the activities that occurred at the party but to the man's own emotional reactions to the guests at the party.

Likewise it is easy to conceive of a teacher whose qualities are such that she proves well-nigh intolerable to some children. In such cases the child may manifest unusual reaction to the teacher and only the most tactful and alert teacher will be able to perceive the trouble. In a normal situation where a child, otherwise normal, acts abnormally, it is a pretty safe rule to make a rather careful survey of his emotional tendencies. In nearly every case his peculiar activities will not be due to the cause it appears to be but because of some thing which he is probably attempting to conceal. For instance, suppose I am standing on the streets of Louisville watching the teachers pass and someone whom I do not know yells, "Hello, Rube, how did you get that way?" Let us assume that I at once start after him and in my haste I slip on a banana peel and fall on my back on the sidewalk. Everybody who sees me fall laughs. I am ashamed of the incident and just as I pull myself up from the sidewalk, let us imagine that the church chimes begin to sound. I go back to Lexington, my home city. Of course I am careful not to tell anyone about my escapade in Louisville. In fact, I do all I can to banish the thought of it. The following Sunday I am standing on the streets of Lexington talking to one of my friends when the church chimes begin again to sound. I rave to my friend about what terrible discordant noises they make. I even venture the assertion that the man who invented chimes ought to be imprisoned. My friend looks at me in amaze-

ment. He cannot understand such actions, for to him the music is wonderfully pleasing. No, he cannot understand my ravings and he never will until he understands the emotional reactions which are prompting my unnatural activities. Such emotional reactions produce great differences in the emotional make-up of our pupils.

In school achievement. Psychologists today are not tending to look upon intelligence as an ability but as abilities, so that although the intelligence test may indicate that two children have similar intelligence quotients, it does not follow that they will be equally good in all subjects. Whether it is because of a lack of a sufficient amount of some ability or a lack of interest or energy, the fact remains that we often find children far behind in some subjects and ahead of the normal child of his age in other subjects. In the past it has been thought that under such circumstances one could not do much with such children in the smaller schools where there were no special coaches for laggards or some sort of catch-up room. It appears, however, that under such conditions it would be an easy matter for the teacher to let a sixth grade child who can only do fourth grade arithmetic work, for instance, recite with the fourth grade in arithmetic and then go to the sixth grade for grammar and perhaps to the eighth grade for history. If it is a consolidated school the same scheme can be followed if the principal will see that all classes in arithmetic are scheduled for the same time, and all classes in spelling for the same time, etc. In such a school, when the bell rings for arithmetic, there will be considerable shifting from one room to another, but children will be more nearly placed at their educational level and the great efficiency resulting will far outweigh any loss due to the slight confusion from changing. A child who must recite in a class below his normal grade will not stay in it long, for as soon as he gets a foothold he often moves forward rapidly. For example, a certain boy in the second year of the high school could not spell the simplest words. It was recommended that he take spelling with the eighth grade but he was still a failure in spelling. He was then put in the seventh grade spelling, then the sixth, until

he finally reached the third grade level and there for the first time in his life he experienced the thrill of making a hundred. Here he found a foothold and at the end of the year he was in the seventh grade spelling, and doing excellent work.

Amounts of These Differences. The amounts of differences in the intelligence and the capacities of school children is astonishingly high. One will find in almost any school some children whose mental capacities are very near that of a low grade moron, and others whose mentalities are very superior. It is no easy matter to place these children in school so that each will live up to his full capacity. As far as differences in achievement go, it is not uncommon to find some children in the third grade better spellers than some in the seventh. Starch¹ claims that if a teacher put sixty per cent of the pupils back in the grade below, there would be no change in the average ability of the two groups. If this is true we could apparently profit much by a careful regrading in most schools. It has also been shown that it is not uncommon to find in a grade one pupil who can make an achievement score from two to twenty-five times as great as the dullest in the grade. Recent tests in school surveys and school experiments indicate that often a majority of a certain class could exchange places with the class below without causing any serious disturbance. In a recent experiment, educational tests showed that children in the fourth grade achieved more and showed a better intelligence test than some in the seventh grade. It is even possible that some high school pupils will not make as high a score on achievement tests as pupils in the fifth and sixth grades of the elementary school.

J. E. Adams and C. C. Ross have shown that frequently bright pupils can completely skip a grade and still make better scores than the average pupil in the grade to which he skipped.

All this goes to show that the differences between children in the same school or in the same class are much greater than one would suspect, and one of the most pressing problems in the

¹ Starch, Daniel, *Educational Psychology*, The Macmillan Company, 1919, page 36.

educational field today is how to place these pupils and grade the subject matter so that they will receive the advantages which they need. Let us, then, turn to a discussion of some of the schemes being used today for meeting individual differences.

Attempts to Meet Individual Differences. Various schemes and devices are being used today in an attempt to cope with individual differences. In some schools special classes for the backward children are being organized. Often these classes are placed in ungraded rooms. Any child who is failing to do the work is sent to this room and begins work on the level at which he is capable. In other places unassigned teachers are employed to go from room to room and coach pupils that are especially slow at their work and are failing to make good. Other schools meet the problem by having the curriculum of the school planned along parallel lines, so that a slow pupil is not expected to do as much work in a year as a pupil who is more capable. Illustrations of this may be noted in the Cambridge double-track plan or the Barbara concentric plan. In the former plan the amount of work to be done is the same for all pupils but the slow pupils are allowed more time in which to do it. In the Barbara concentric plan the amount of work to be done is a variable. Other schools are making the unadjusted child a special case for study and instead of attempting to send him to an ungraded room or putting him in a special class, they give him the special type of work which he needs without segregating him from the group. In Detroit special groups are made on the basis of ability, the brightest part of the class going in what is known as the X-group, the average pupils in the Y-group, and the pupils in the lowest third in the Z-group. The work is so arranged and presented that it is within the capacity and ability of the particular classes.

Whatever plans may be used in handling special classes and making rapid promotions, most of them resolve themselves into one or two schemes. Either the time is kept constant and the curriculum enriched for the bright pupils, or the curriculum is kept constant and the time shortened for the brighter pupils. Both plans are used and both have their favorable arguments.

Some authorities doubt whether individual differences can ever be met through special classes and consequently they advocate the individualized method of instruction. In such schools there is usually so much work to be done and each pupil is permitted to do it at his own rate.

In the school system at Winnetka, Illinois, for instance, in so far as learning the skills is concerned, each pupil is permitted to move at his own pace. When a unit of work is done a test is given by the teacher and the work checked, then the pupil is permitted to go on to the next unit regardless of whether any of his other schoolmates are ready for that unit. Even in Winnetka, however, in many other activities than the skills, pupils are permitted to work together in groups. In the Dalton plan, which is another type of individualized instruction, much stress is put upon the laboratory method of work. Each child is taught to budget his time, but is permitted considerable individual freedom in the time he takes to do certain units of work which fall within his level.

The fact that there are so many different methods and schemes being used today with the hope of meeting individual differences is evidence that in trying to solve this particular problem we are not at all sure where we are going. It takes much more money and a greater teaching force to conduct the schools so that every child can move at his own pace than it does to conduct schools where pupils are moved in masses by utilizing class instruction. Everybody knows that mass instruction is inefficient, and that with such a plan the bright child is apt to be held back at the rate of the average, and the slow pupil prodded in the hope that he can keep up with the average. In such cases neither the bright pupil nor the dull pupil receives the optimum good. When a bright pupil is held back at the pace of the average he is likely to develop habits of idleness that are very detrimental. On the other hand, to prod the slow pupil along at the pace of the average child means in most cases that he will get the work very poorly and that he will probably terminate his school career in discouragement and failure.

A great deal is being done today toward meeting individual differences through an individualized method of instruction. Work books for almost every type of subject are being devised, while many of the modern textbooks provide for a method of study and teaching that is of great aid. An excellent illustration of this may be noted in the field of spelling. Under the older dispensation, spelling was almost always taught by the day and no attempt was made to find out which words in the assignment any particular pupil could or could not spell before study. The same amount of time for studying spelling was allotted to each child.

Today almost all modern spellers advocate assigning the words by the week. Then either before study, or after a reasonable amount of study in which a pupil is permitted to learn the correct pronunciation, the meaning and the image or picture of the word through visualization, a test is given to see what words each pupil needs to study. The test may show that some pupil can spell all the words and needs no further study, while others may find difficulty with every word. An illustration of the newer plan for teaching spelling, whereby individual differences are considered, may be seen from the following instructions which are taken from *The Child-Centered Speller*:¹

a. Words are to be assigned by the week instead of by the day.

b. Monday's recitation in spelling is to be utilized in acquainting pupils with the words for the week. It should be the teacher's purpose on Monday to see that each pupil can pronounce accurately every word for the week, that he may know the meaning of every word, and that he may get some practice in visualizing the word.

c. On Tuesday, pupils will write the words on their spelling pads as they are pronounced by the teacher. Encourage pupils not to try to spell any word when in doubt about its spelling. After the test each pupil will make a list of the words he missed or did not try. This list of words then becomes his spelling list for Wednesday. There is to be no spelling test on Wednesday.

d. On Thursday a written test is to be given on the week's list and also on the review list. At the close of this test each pupil again writes correctly any words missed or not tried. These words are then to be studied before Friday's test.

¹ Adams, Jesse E., *The Child-Centered Speller*, Augsburg Publishing Company, Morristown, Tennessee, 1931, pages 16-17.

e. On Friday a written test is to be given on the same list as was used in the test on Thursday. Any pupil missing a word on this test should write the word correctly on a little card and place it in his spelling pocket. It then becomes his individual spelling demon and he should be encouraged to study it every time an opportunity presents itself. When the pupil thinks he can spell any word in his spelling pocket, he is to go to the teacher and try it. If he can spell it, the teacher gives him permission to throw the card away. The teacher should keep a list of the words missed by each pupil on Friday.

f. The score made on Friday's test is the score to be entered on the graph sheet.

In the meantime it is to be hoped that all schools will soon do more to develop some satisfactory plan for meeting this all-important problem of caring for individual differences among our school children.

QUESTIONS AND EXERCISES

1. What is meant by a normal curve of distribution? Is ability grouping based on the assumption that the mental ages of children fall in a normal curve of distribution?
2. What is meant by homogeneous grouping? What are the arguments for and against this method of grouping?
3. From your observation does it appear that biological heredity is stronger than social heredity? What are some of the factors that make it difficult to know the relative effects of these two types of heredity?
4. Should a teacher ever promote a child on the basis of chronological age? Justify your answer.
5. Would it be better to segregate boys and girls into different classes in high school? Why?
6. To what extent should the school be held responsible for the moral attitudes of the pupils?
7. Are our schools conducted on the assumption that the mind is made up of many specialized abilities? Justify your answer.
8. In what respects are the Winnetka and Dalton plans alike?
9. Is it more democratic to take care of the bright pupil than the dull? Why?
10. From your observation, what do you think are the chief differences intellectually between boys and girls? To what extent does the school appear to be meeting these differences?
11. Do similar methods of teaching tend to lessen or increase differences among the pupils?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER VIII

TESTING AND MEASURING

Intelligence Tests. As soon as we began to study seriously the whole problem of individual differences it was recognized that some measure of the existing difference was badly needed. One does not need a refined measure of intelligence to detect the idiot from the normal person, or the moron from the precocious. Neither is refined measurement needed to recognize that such men as Galton, Lord Bacon, and Descartes are above the average run of men in their capacities for achievement, nor is it necessary to measure accurately to know that the thousands who fill our feeble-minded institutions are below the average individual in their capacities. No, those people at the opposite ends of the intelligence scale have always been recognized. But individuals as a whole do not differ by extreme amounts. The differences between two consecutive individuals on the normal curve of distribution can be put down as well-nigh imperceptible amounts. Consequently if these differences are to be dealt with in a scientific way, some measurement more refined than opinion must be used. The need felt for such a measurement leads to the development of what is known today as the mental or intelligence test. This, then, will be the first subject for discussion in this chapter.

Mental tests. Mental tests are of rather recent origin. For practical purposes they may be thought of as having their origin in 1905. Binet, the French psychologist, in 1904 was made a member of a commission whose chief purpose was to organize classes of subnormal children in Paris. A realization of the importance of this work led, in 1905, to the production of the Binet-Simon measuring scale of intelligence. This scale is a

group of tests arranged in a series of increasing difficulty. Later the tests were revised so that in 1911 they finally comprised fifty-four tests in all. There were five different tests or problems for each age from three to ten inclusive, excepting the age of four where there were only four tests, and in addition to these there were five tests for the twelve-year age, five for the fifteen-year age, and five for adults. Some conception of the nature of the tests may be seen from the four tests for the four-year age which were as follows:

1. Gives his sex.
2. Names key, knife, penny.
3. Repeats three digits.
4. Compares two lines.

The five tests for age fifteen were:

1. Repeats seven digits.
2. Finds three rhymes for a given word.
3. Repeats a sentence of twenty-six syllables.
4. Interprets pictures.
5. Interprets given facts.

Later, in 1916, the whole scale was revised by Professor Terman of Stanford University.¹ The new revision which is the most widely used individual test in America today consists of six tests for each age from three to ten inclusive, eight tests for age twelve, and six tests for age fourteen, six for the average adult, and six for the superior adult. In addition to these, each age from three to six has one alternate test, each age from seven to nine has two alternate tests, age ten has three alternate tests, age fourteen has one, and the average adult has two. In all, then, there are seventy-four tests besides the alternates. All the tests are along the line of the original Binet-Simon tests in that they are stunts or problems to be solved.

Both the Binet-Simon Scale and the Stanford Revision of it are individual tests. They are given to only one pupil at a time. Tests that followed these closely, such as the Point Scale by

¹ Terman, Lewis M., *The Measurement of Intelligence*, Houghton Mifflin Company, 1916.

Yerkes, Bridges, and Hardwick, and the Pintner-Paterson Performance Scale, were also to be given to one pupil at a time. In all these tests it was soon recognized that they were very costly in time. In large groups it was almost impossible to use them. Therefore group tests soon made their appearance. This made it possible to give tests to whole groups at a time. At first the psychologists were somewhat skeptical of group tests, but today they are being used very widely and have the sanction of all the psychologists. One of the most widely used of the group tests has been the Army Alpha Test. During the World War more than 1,700,000 men took this test. It was also extensively used following the war. Many other group tests (between thirty and forty now) are rather widely used. Many universities are giving group tests to all their entering students, and some universities are using them for classification purposes.

The wide use of the group test does not mean that the individual test has been discarded. The individual tests are also widely used, particularly for a more refined measurement or as a further test when there is a doubt about the results obtained from an individual who has taken the group test. In short, then, we may say that the mental test movement is quite extensive in America today and that both individual and group tests are widely used.

What does the intelligence test measure? One could very easily answer this question by saying that intelligence tests measure intelligence but it would be about as parrot-like as to define iambic verse by saying that it is a verse that has in it iambic feet. In other words, unless one knows the meaning of the word, intelligence, the answer to the question, what do intelligence tests measure, does not mean much. In fact, it is the meaning of intelligence that presents the greatest stumbling block of all.

1. IS INTELLIGENCE A SINGLE CAPACITY OR MANY CAPACITIES? Does the mind act as a unitary whole, that is, does intelligence rest upon some unitary factor or is it made up of many factors or special abilities? On this point one finds a considerable difference of opinion among the most prominent psychologists.

Dr. Thorndike speaks of abstract intelligence, social intelligence, and mechanical intelligence. He believes that one may have large amounts of any one of these, without possessing nearly as much of the others. That is, he thinks there is a multiplicity of innate abilities which make up intelligence with a positive correlation between them, but that an individual may be much stronger in one trait than in any of the others. To be specific, a man may be born "long" with his fellows (social intelligence) but he may be much less adept at learning arithmetic and Latin (abstract intelligence). Or again he may be very much interested and efficient in handling tools in the manual training room (mechanical intelligence) but not be able to make happy social contacts.

In opposition to this point of view one will find Spearman claiming that all persons have a certain all-round learning capacity and that the differences between individuals in any ability are closely related to their differences in intelligence. A roll call of the psychologists today would probably find the greater number leaning toward the Thorndike idea.

2. WHAT IS MEANT BY INTELLIGENCE? No definition of intelligence has yet been presented on which all or even a majority of psychologists are agreed. Some claim that the word ought to be scrapped and a new word found; others think that it is not necessary to know its meaning in order to measure it intelligently since electrical currents were measured long before their nature was understood; and still others continue to give their own interpretation of the meaning of the term. Among the problems presenting themselves when one undertakes to define intelligence are:

a. Is intelligence acquired or inherited? Some of our writers do not think of intelligence as a thing inborn. They say that only the capacity to become intelligent is inborn. In such cases intelligence would refer to what an individual picks up in the time he has lived. In this sense intelligence should be thought of as acquired. From this standpoint we would think of intelligence tests as measuring the things that are acquired. From

this we deduce the amount of the capacities with which one comes into the world at birth. The writers are in sympathy with this point of view to a considerable extent, although it may be more a quibbling over terms than anything else. However, it is undoubtedly true, that intelligence tests or mental tests do not measure directly anything that is inherited. They do not even measure the amount of knowledge picked up during the time the individual has lived. All they do measure is the performance of the individual on the test and from this we deduce what he has learned from which in turn we deduce what he has inherited. Consequently an intelligence test is a reliable measure of an individual's capacities only to the extent to which he performs in the test to his full possibilities. Therefore if two individuals are to be fairly compared on the basis of the test results, one ought to be sure that both had the same opportunity of picking up the knowledge called for on the test and that they were equally interested in picking up this particular bit of knowledge. Of course this literally is never true. Consequently our makers of mental tests have tended to overcome errors caused by those differences in opportunities by asking about a wide range of things. By this means they hope that if an individual is handicapped by ignorance of one bit of knowledge called for on the test, somewhere along the line he will have an advantage on another test.

b. According to what standard shall we measure intelligence? One way of looking at intelligence is to think of it in relation to the degree of success which one has in managing the affairs of life. Thus a feeble-minded person would be one who could not "manage himself and his affairs with ordinary prudence." This is undoubtedly a very rough way to estimate intelligence since there are individual differences in our affairs, and consequently differences in the abilities needed.

Many psychologists have thought of intelligence as the power or ability to meet comparatively new situations. Many other definitions have been proposed but most of them have some of the same elements as the two points of view mentioned above.

Probably, after all, the definition means little. Almost everybody understands what we mean when we say an individual is intelligent. We all know that it comes with a certain degree of ability to think, a kind of native wit that will help him to compete favorably with his fellows in the race of life.

c. Certain terms used in measuring intelligence: 1. Mental age. In general terms mental age means the number of years old an individual's mind is. For example, a child is considered to have a mental age of ten years when his mind has reached that state of development possessed by the average ten-year-old child. His mental age is usually expressed in years and months just as is his chronological age. 2. Intelligence quotient. The intelligence quotient is the quotient one gets by dividing the mental age of an individual by his chronological age. For example, if a child is six years old mentally and eight years old chronologically, he has an intelligence quotient of 75. On the Stanford Revision of the Binet-Simon Scale anyone with an intelligence quotient (I.Q.) of from 90-110 is near enough to the limits of the normal standard to be considered normal. An individual with an I.Q. of less than 70 is usually considered feeble-minded; that is, he is so far below the normal that it is doubtful whether he could succeed in doing the ordinary type of school work.

An interesting question to raise here is whether the I.Q. of any particular individual is constant throughout life. That is, if a person is below normal (I.Q. less than 90) will he continue with this rating or might the I.Q. increase with the proper type of environment? This question has been discussed pro and con for a long time. Recent experiments, however, indicate quite strongly that the I.Q. may be materially affected by the environment.

A group of children were tested before placement and then re-tested after several years of residence in a foster home. A comparison of their ratings on the two tests gave evidence of a significant improvement in intelligence (as measured by intelligence test scores). A study of certain sub-groups showed that the children in the better foster homes gained considerably more than did those in the poor homes. Furthermore, the children who were tested and adopted at

an early age gained more than those adopted at a later age. These facts appear to indicate that an improvement in environment produces a gain in intelligence.¹

Objections to mental measurements. For the most part mental measurements have been of great value in helping us to detect more accurately the level of intelligence of individuals. They furnish a standard to grade by, which in itself is of material help. Without a standard, teachers will not have a very definite idea of what constitutes intelligence. It is also claimed that teachers may easily misjudge intelligence because of a sprightly attitude on the part of the pupil. Also they often do not seem to agree on which is the brighter of two children. There are, in other words, several arguments in favor of intelligence or mental tests. There are, however, some objections to them. Chief among these objections may be mentioned the following:

1. THEY DO NOT MEASURE WITH THE PRECISION OF PHYSICAL MEASUREMENTS. This argument is quite true. Mental tests attempt to measure a far more difficult thing than do meters and yardsticks. One deals with a growing and changing thing, the other deals with an inanimate thing. Moreover, mental tests are new and doubtless the tests themselves need much refining. The physical scientist has no right to rule out mental tests, however, just because they vary in their measurements, for physical measurements also vary. One does not weigh the same on all parts of the earth's surface. In building a bridge in cold weather a considerable space must be left between the rails, for the steel will expand when the weather gets hot. Metal yardsticks are not exactly the same length the year around.

But while physical measurements vary, it must be admitted that they do not vary as much as mental measurements. It must also be admitted that the physicist and chemist know quite accurately the coefficients of expansion for physical materials, so that they can allow for correction much more precisely than can the mental tester.

¹ *The Twenty-seventh Yearbook of the National Society for the Study of Education*, 1928, Part I, page 209.

2. MENTAL TESTS DO NOT MEASURE WHAT THEY PURPORT TO MEASURE. This objection must be recognized. Mental tests, as we have seen, do not measure anything innate or anything mental in so far as direct measurements are concerned. What they do measure is what has been picked up (achieved in a general sense) and from this the estimates of intelligence are made.

3. MENTAL TESTS ARE NOT FAIR SINCE ALL CHILDREN DO NOT HAVE THE SAME CHANCE TO PICK UP KNOWLEDGE. This objection also has merit. The mental test attempts to correct the differences in chance, however, by making the tests so general that when a child does not have a fair chance in one test he has more than a fair chance in some other test.

4. IT IS UNDEMOCRATIC TO USE INTELLIGENCE TESTS. The assumption here is that children are graded on the basis of what the tests show and that this is undemocratic. The argument is sometimes advanced that in so far as school life is concerned, the bright and the dull should be kept together so that the dull will not be "looked down upon" and in order that they will have a chance to "pick up" things from the brighter children. This argument is weak. To place a pupil in a homogeneous class where all his classmates are of about the same caliber and all can move at about the same rate would appear to be a full endorsement of the democratic ideal of a fair chance for all. On the other hand, to hold the bright child back so that he must move at the pace of his less fortunate fellows seems highly undemocratic.

Values and uses of mental tests. The following are some of the most common uses being made of mental tests:

1. FOR THE SECTIONING OF CLASSES. In many public schools and colleges, mental tests are being used to segregate pupils in classes on the basis of ability. In the Detroit public schools for instance, entering pupils in the first grade are divided into an X-group, a Y-group, and a Z-group on the basis of intelligence. Ample machinery is set up for the transfer of a pupil from one section to another if later procedure shows that for some reason

a pupil is not properly classified. A study in 1926 by Dean C. E. Seashore of the University of Iowa ¹ showed more than fifty-five colleges already sectioning on the basis of ability. These colleges quite generally claim that such sectioning shows the following results:

- a. Bright students work more diligently.
- b. Work suited to the lower students can be offered.
- c. Failures are reduced.

2. TO MAKE INDIVIDUAL DIAGNOSIS FOR THE PURPOSES OF CLASSIFYING INDIVIDUALS. Not only is the mental test of value in sectioning classes, but it is also useful in the diagnosis and grade placement of the individual.

3. FOR SURVEY PURPOSES. Often the same tests are used in surveys of various sorts. This makes it possible to make comparisons between communities. One community can then know rather accurately whether the intellectual level of its children reaches the intellectual levels of the children in other communities.

4. FOR VOCATIONAL GUIDANCE VALUES. Mental tests are used somewhat extensively today for predictive purposes in vocational and educational fields. The employer uses them in selecting employees, and the individual uses them to find out what vocation he is best fitted for. It is probably not too much to expect that in the near future we may know to a high degree of accuracy the traits one should possess in order to be a good clerk, a school executive, or office secretary; and then have mental tests that can tell just as accurately whether or not an individual possesses the necessary traits which make for reasonable success in these fields.

Already there are many tests on the market that test different traits which go into the making of personality. For example, June E. Downey has made a test to measure one's will and temperament.² In this test one is supposed to reveal his will

¹ *Bulletin of the American Association of University Professors*, Volume 12, Numbers 2-3, 1926, page 134.

² Downey, June E., *The Will Temperament and Its Testing*, World Book Company, 1923.

temperament through his handwriting. If through one's writing such characteristics as decisiveness of reaction, carefulness, and persistence, can be measured, as is believed by Downey, then it does appear that by this means an individual might predict with a degree of accuracy whether he possesses some of the essential traits for a salesman or a school executive.

5. FOR CLASSIFICATION OF CRIMINALS. More and more mental tests are being used in courts to learn whether or not an accused individual is morally responsible for his acts. Even after an individual is convicted of a crime, his sentence is often based on the level of his intelligence. He may be sentenced to the penitentiary, reform school, or a feeble-minded institution, depending on his intellectual capacity.

Kinds of mental tests. Mental tests may be classified on different bases as given below:

1. ON BASIS OF NUMBER TESTED AT A TIME.

a. Individual.

1. Performance or non-language tests, *e.g.*, The Pintner-Paterson Performance Scale.
2. Tests involving use of language, *e.g.*, The Standard Revision of the Binet-Simon Test.

b. Group.

1. Performance or non-language tests, *e.g.*, The Army Beta; the Pintner Non-Language Test.
2. Tests involving use of language, *e.g.*, The Army Alpha; the Detroit First Grade Intelligence Test; and the National Intelligence Tests.

Most performance tests call for a motor rather than a verbal response. They do not depend on the ability to read. Naturally they are used quite extensively with illiterates, children too young to read, and foreigners who do not understand certain languages. The Pintner-Paterson Performance Scale, and the Porteus Maze Scale are good examples of the performance type where children are asked to do something rather than say something.

Group tests are tests that can be given to a whole group at the same time. The Army Beta Test is an illustration of the performance group test and the Army Alpha Test illustrates the group test that depends on reading.

2. ON THE BASIS OF WHAT IS MEASURED. On the basis of what mental tests measure they may be classified as:

a. General intelligence. In general intelligence tests the results are usually expressed in terms of I.Q., mental age, etc.

b. Special intelligence, more commonly called aptitude or prognosis tests such as:

1. Mechanical aptitude, *e.g.*, Stenquist.

2. Musical aptitude, *e.g.*, Seashore.

3. Aptitude for special school subjects, *e.g.*, Orleans-Solomon Latin Prognosis Test.

The Muensterberg Test for street car motormen, the various tests for aviators such as the rotation test, and the Woolley-Fisher Test for Telegraphers are illustrations of aptitude tests.

Educational Tests. Educational tests are said to measure achievement in contradistinction to the mental tests which, it is claimed, measure capacities. As has already been said, the mental tests in reality also measure achievement. The difference, then, in the mental test and the educational test is that the former measures achievement in a general field, probably from the point of view of the experiences of a whole life, while the educational test measures achievement in a specific field such as arithmetic or spelling.

Educational tests may be either standardized and formal or non-standardized and informal. We shall turn our discussion to the formal educational test.

The formal educational test. A formal educational test is one that has been scientifically constructed and has been given to so many pupils that standards or norms which should be attained in each grade by the normal pupil are quite accurately known. Such tests, it is claimed, have the following advantages over the usual test made by the teacher:

1. ADVANTAGES OF THE FORMAL EDUCATIONAL TEST. *a.* Being standardized, they furnish a common yardstick for measuring pupils, classes, and school systems in different communities. This permits of comparison between individuals, classes, or systems.

b. Since the tests are often constructed and standardized by the best authorities on the subject for which the test is intended, they are more likely to test the most important parts of the subject matter than if they were made by a teacher with less experience and training.

c. They are usually very objective, so that the score one makes does not rest upon the subjective feelings of the teacher. This is a very important point in testing. Teachers differ widely in their methods of grading and the same teacher will mark a paper differently at different times. One of the authors has frequently handed the students in his classes a certain specimen of writing and asked each member of the class to grade it. No person, of course, recorded his grade on the written sheet. The students were usually told that the writer of the specimen was an applicant for a certificate to teach school. The marks given by the different graders varied all the way from fifty per cent to ninety-five per cent. This meant that whether the applicant got his certificate to teach depended entirely on who was grading his manuscript. Such variations ought not to exist. When a similar sample of writing is graded by the same graders but with the Ayres Writing Scale used as a standard, the variations in grades are much less. Since formal tests are largely objective they should aid materially in overcoming the great discrepancies that exist in our grading.

d. In a formal or standardized test the factors which might affect the child's performance after the directions are given are carefully controlled.

It is evident that in an essay test that requires a great deal of writing, like history, for example, the child who writes slowly will be at a great disadvantage. He may complete only one-half the test, not because he does not know the answers to

the questions but because he cannot write rapidly enough to finish the test in the time allowed. In other words, such a test may prove to be a test of his rate of writing rather than a test of what he knows in history. Such factors are usually very carefully controlled in all standardized tests.

2. CRITERIA OF A GOOD FORMAL EDUCATIONAL TEST. While no directions can be given for selecting them, the following are characteristics one would look for in selecting this type of educational test:

a. It must have validity. That is, it must measure what it purports to measure. A synonym for *validity* is *truthfulness*.

b. It must have reliability. It is reliable if it gives an accurate measure of the abilities tested. A synonym for *reliability* is *consistency*.

c. It must have usability.

1. To be usable, the instructions given with the test must be complete and clearly stated. If the instructions are incomplete, so that the pupils are in doubt as to what to do, one cannot expect the scores made to be a measure of what the pupils know.

2. It must have adaptability. To be adaptable it must be suitable in the field for which it is designed, and must come within the pupil's experiences.

3. It should be easily scored, and not too expensive. Either or both of these traits might hinder it from being practical.

3. KINDS OF STANDARDIZED EDUCATIONAL TESTS.

a. On the basis of the number taking a test at one time, tests may be either:

1. Individual or
2. Group.

b. On the basis of their use, tests may be classified as:

1. Diagnostic.
2. Practice.
3. Survey.

c. On the basis of what the tests measure, they may be classified as:

1. Rate tests.
2. Power tests.
3. Quality tests or scales.

The purpose of a diagnostic test is to find types of errors and their causes. In other words, if a child is having trouble with his arithmetic, spelling, or reading, and a teacher wants to correct the difficulty, she must first find the nature of the difficulty and then its causes before she is in a position to offer remedial measures. A number of such tests are now on the market and can be purchased for use in almost any subject.

After the teacher has diagnosed the case, remedial measures should be applied. The different practice tests on the market, such as the Studebaker Practice Tests in arithmetic, are excellent for this purpose.

The survey tests are those which measure progress and attainment. They are, of course, very widely used.

Rate tests attempt to measure the rate at which an individual can perform his work. In such tests the different units of work are usually of the same difficulty and one's score depends on the number of units of work he can do in a given length of time.

Power tests are tests that undertake to measure the ability one has for doing difficult problems or units of work. They usually begin with some rather simple units, each succeeding unit becoming a little more difficult than the preceding one. The power test does not usually have the time element in it. One simply goes up the scale until he reaches the unit which is so difficult that he can go no higher.

A quality test tests how well a person can do a thing; that is, what quality of work he can do. For example, a test that would measure the legibility of one's writing would be a quality test, but a test that would measure the number of letters one could write in a given length of time would be a rate test.

4. FUNDAMENTAL PRINCIPLES ON WHICH EDUCATIONAL MEASUREMENTS ARE BASED. There are definite underlying assumptions that have caused much widespread interest in educational measurements. Beginning about 1910, the educational test

movement spread widely. There are available today approximately one thousand different types of educational tests alone. In addition to these, hundreds have been made that for some reason or other are not now available. Evidently such rapid development is based on certain principles or beliefs. Some of these underlying beliefs are as follows:

a. Education means change. No one will deny today that education is the process of producing desirable changes in the individual. Consequently it is not only important to know in education that changes are being made but it is equally important to ascertain the magnitude and the direction of the changes produced.

b. Whatever exists, exists in some amount. It is certainly true that whatever exists, exists in some amount. It would be a fine thing if we could follow this statement by the further statement, "and the amount can always be measured." Unfortunately the latter statement cannot truthfully be made as yet. Some vital qualities in education are not yet subject to an accurate measurement. This feeling has stimulated the test movement and at present we are tending to move in a direction which may ultimately end in the measurement of all educational changes.

c. Educational progress depends to a large degree on scientific measurements. Education can never hope to become a science until it can measure its product in definite quantitative terms. This feeling on the part of educators has doubtless had something to do with promoting the standardized test movement. Definite measurements are indispensable if we want a science of education.

The informal educational tests.—1. THE NEW OBJECTIVE TYPE OF EXAMINATIONS. The non-standardized test has been given since the beginning of schools. The traditional type was largely of the essay form and usually reflected to a considerable extent the subjective feelings. In the past few years, however, the non-standardized tests have been made up very largely of objective tests. They are not standardized but they have the element of strong objectivity in scoring and therefore from this point of

view they are not subject to the criticism of the traditional essay type of examination. To the teacher the new objective type of examination should prove of absorbing interest. It can be made up by the teacher at her own discretion, is easily graded and can be varied. Several types of these tests are already being used in thousands of classrooms. Among the new objective types that are being most widely used are:

a. Completion tests. Completion tests may be such that the simplest type of recall is necessary or they may be made very complex. For example, in the test, "George Washington was born in the year —," the necessary recall is very simple, but in a test where the sentence is relatively long and many words or phrases are to be completed, they become very difficult. Completion tests are widely used. They are easily made, and easily given. They can be made so that they test well both the thought and the preparation, and at the same time they serve as vocabulary builders. They are not as objective, however, as some of the other tests.

b. True-false tests. A true-false test consists simply of many statements, some of which are true and some false. The student marks either "yes" or the plus sign before the questions he considers right, and "no" or the minus sign before the questions he thinks are false. Since an individual by the law of chance should get one-half of the questions right if he merely guessed at the answers, the scoring is usually done by taking the number of answers that are incorrectly marked from the number of answers that are correctly marked. This, to a very large extent, at least, prevents the pupil from getting credit merely on guesses. In a true-false test one should have about as many true as false statements but they should not appear in any definite order. All ambiguous statements should be avoided and the statements should not be too long. One criticism of this type of test is that it is usually considered bad psychology to put the wrong form of a statement before the pupil. It has the advantages, though, of being highly objective and of making it possible to test him on many points in a short time.

c. Multiple response. In this type of test several suggestive answers are given and the pupil simply checks the best answer. To illustrate: "The most important foods for tissue repair are the fats proteins minerals carbohydrates vitamins." It is clear that in this test the guessing element is largely eliminated. In the example given, if the pupil merely guesses, he has only one chance in five of getting the correct answer.

d. Matching exercises. Pupils usually enjoy this type of test. In this test two columns of associated words, or dates and events, are given to see if the pupil associates the correct items. The events with their corresponding dates listed below illustrate this type of test.

EVENT	DATE
1. Battle of Waterloo.....	1803
2. Invention of steamboat.....	1863
3. Invention of cotton gin.....	1793
4. Battle of Gettysburg.....	1815
5. Purchase of Louisiana.....	1807
6. The Emancipation Proclamation.....	1862

In this test the pupil puts a 1 in front of the date that goes with the Battle of Waterloo, and a 2 before the date on which the steamboat was invented, a 5 before the date when the Louisiana Purchase was made. It is quite easy to make matching exercises and they can be used in any subject one happens to be teaching.

There are a number of other new objective types of examinations, but the four given here are probably the most widely used.

2. THE ESSAY TYPE OF EXAMINATION. The essay examination is the oldest type of written examination known. It is easily made and serves the purpose of giving the pupil a chance to express himself in his own words. In the scoring it is highly subjective. For this reason, when the objective type of examination came into use there were some who believed the essay type of examination had seen its day and ought to be discarded. However, this belief is not held by the best authorities in testing. It is generally

believed that the newer tests were never intended to replace the essay type of test but to supplement it instead. Certainly this is the point of view held by the authors.

What Are the Purposes of an Examination? There appear to be only two fundamental reasons for giving an examination. They are:

To test or measure accomplishments. This purpose has been the dominant one throughout the greater part of our history of education. To know as exactly as possible how much an individual or a class has accomplished seems quite essential. By this means the teacher can judge the worth of her teaching and the extent to which the subject matter is being learned. It is very probable, however, that the chief reason for testing the accomplishments of the pupil is to see whether he has mastered enough of the work to do the next higher unit. This is why pupils sometimes detest examinations. They have been in a sense a measure of their degree of unfaithfulness and inability. Tests have been used too much as a day of reckoning and an accounting for one's stewardship.

To test for the purpose of teaching. Undoubtedly the chief value of examinations should be the improvement of teaching. When pupils take a test and then look up the answers to the questions the chances are pretty strong that they will learn as much subject matter as if the regular class discussion had been carried on. It calls the pupil's attention to his weak points and at the same time serves the purpose of motivation. Many people also think that it is worth much to the pupil merely to have to jump hurdles once in a while. From this point of view it would appear to be unwise to follow the practice of exempting bright pupils from examination. If jumping the hurdle of the examination is a good thing, then the bright or "good" pupil should jump it as well as the backward or dull pupil.

From the standpoint of teaching, the examination is probably worth as much to the teacher as to anyone else. It gives her an opportunity to check the effectiveness of different methods, and is a help in presenting to her her own weaknesses. A careful study

of the results of the examination will give the teacher a better conception of the crucial points in the subject matter and thus put her in a better position in the future to avoid the repetition of past mistakes.

In this connection it should be said that from both the teacher's and pupils' standpoint an examination is not worth much unless the papers are graded and handed back. Without grading the examinations may serve the purposes in motivation, but they are of little value in revealing weaknesses in teaching to the teacher or weaknesses in accomplishment to the pupil. The real values are brought about by revealing weaknesses and by following up the test with remedial measures. When educational tests first appeared on the market many superintendents of schools bought tests and gave them to their whole school, and then after the tests were given they were tucked away in the corner of the office somewhere and were never referred to again. Such a procedure, of course, is entirely valueless, if not actually productive of negative results.

QUESTIONS AND EXERCISES

1. What do you consider the chief purposes of an examination? Should a pupil's marks be lowered if he takes more than the time allowed to complete an examination?
2. How would you proceed to standardize a set of examination questions?
3. A recent writer has advocated that there is a general intelligence and also a number of special mental abilities. What do you think of this theory?
4. Are there any real basic objections to intelligence tests? What are they?
5. Is it possible to make an essay test that will conform to the criteria listed in this chapter for a good formal educational test?
6. What are some of the things that we know exist in some amount, but that cannot yet be measured?
7. How would you determine whether a test was valid or not?
8. Advance arguments for and against the "normal curve of distribution" in grading?
9. How can a teacher best secure the interest of the parents in school work—by giving high grades or by giving low grades to the children?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER IX

LEARNING HOW TO STUDY

Most of us have not developed the art of study to any great extent. One of the authors recalls a certain student who was in his class. This student complained that the lessons were too long and too difficult to learn. He maintained that he had the ability and the background for the work but insisted that the assignments were too long for the time he had in which to study. One afternoon the writer was in a position where he could observe the "study" of the student although the student was not aware of this fact. Here is a rather accurate description of the way this student studied. First, the student pulled up a rocker by the window where he could put his feet up on the window sill and at the same time observe the scenery through the window. After he had placed a half dozen books on a table near the rocker the student seated himself carefully in the rocker and began to work. After some two minutes of leafing through a book this hard-working student noticed a boy friend passing. The window was thrown up and a conversation of approximately ten minutes followed. Again the activity of studying was begun. No one knows how strong the mind-set was in this second attempt at study. It was soon plain, however, that it was not strong enough to shut out the stimuli that came from a dog fight on the street, for the moment the fight started the student threw all books aside and made for the scene of activity. Here with other boys who had assembled to see the outcome of the fight, more than thirty minutes were consumed. Again our student returned to his scholarly activity. The third interruption occurred when a beautiful young girl, a friend of the student, passed along the street. Another conversation through

the window and the study was resumed for the fourth time. Other interruptions occurred and after two hours and thirty minutes had elapsed our student was more convinced than ever that the lessons were too long to learn in any reasonable time.

Now, as a matter of fact, not twenty minutes were spent in actual study. In fact, it is very doubtful if whole-hearted attention was given at any time. Attention had gone wherever the stimuli happened to direct it. At no time was there a strong mind-set for learning. To what extent is such a parody on study the rule with university students? Suppose each reader of this chapter asks himself the question, "How do I study?," what would the answers be?

Mr. Burton ¹ reports a girl in the seventh grade who said she did the following things when she studied:

1. Read the lesson over.
2. Read about it in other books.
3. Look up the words I do not know.
4. Make an outline or plan of each topic.
5. Put myself in place of one of the characters (History of Literature).
6. Shut my eyes, think of it as a picture, one scene at a time.
7. In battles sometimes draw a plan.
8. Locate places mentioned on a map.

No one would doubt that a student who has such a conception of study ought to succeed. Too many of us, however, are like the other student who wrote, "I just hop to it until I learn my lesson."

If one had a method by which he could measure accurately the amount of studying that pupils do he would doubtless find in many instances that the pupils do a better job of making the teacher study than the teacher does of getting the pupils to study. When the sincere teacher finds a pupil failing to master the work, she does real studying. When a pupil fails to adjust to the social group the teacher studies. When an irate parent

¹ Burton, W. H., *Supervision and the Improvement of Teaching*, D. Appleton and Company, 1922, page 189.

makes his appearance the conscientious teacher studies. This is probably as it should be, for one grows through studying. That one grows through study is probably one of the strongest arguments for study.

Why Is the Formation of Good Study Habits Important? The answer to this question seems quite obvious, but observation of the study habits of a great many pupils convinces one that there must be a great many who either do not realize the value of study or simply do not know how to study. What, then, are the values of good study habits?

Good study habits assure successful progress in school. Learning does not occur of its own accord. All writers agree that in order to learn, some activity on the part of the learner must occur. Attention must be focused on the thing to be learned. Out of the great mass of knowledge one must isolate the things that are essential. Books must be read with discrimination. The multiplicity of books is so great today that it is probably not exaggerating to say that one's standing in his profession will be directly proportionate to the effectiveness of his study habits. No one will reach the plane of a scholar who has not developed effective study habits.

Prevent habits of mind-wandering. There is no doubt but that one can develop the habit of mind-wandering. Moreover, it is an exceedingly binding habit. The mind which is allowed to wander where it will at all times soon develops into a type of mind which finds it well-nigh impossible to give sustained attention. A few minutes of forced concentrated study each day will help to overcome the mind-wandering tendency. Working under a time control is also an excellent device. Set a limit to the time you will give to the mastering of a certain assignment and then work with all your might to learn it in that time. When you sit down to study, lock petty troubles up where they will not be a source of annoyance. Try to shut out from your mind any thoughts of future engagements. In other words, give your whole attention to the thing at hand. It will pay abundantly both in the achievement in your particular field of study and in

the extra joys and pleasures you can have because of the time and energy saved.

Good study habits save energy. The tendency of one with erratic study habits is to spend his energies erratically. Instead of pursuing a line of work until it is accomplished, he will usually be trying something new. His interest span, the length of time he will pursue a given course, is very short. He is the type of fellow who never has time to get his work done and will probably be doing or attempting to do several things at the same time. The writer recalls visiting a superintendent of schools at one time who was this type of person. His desk was completely littered with papers, requisitions, and both opened and unopened letters. While talking to the writer, he also tried to talk to half a dozen other people. He seemed incapable of completing one conversation without starting others. There was no indication that he had caught a glimpse of the meaning of the statement, "This one thing I do." That the superintendent was trying hard to make good and was spending much energy was self-evident. He was not accomplishing much, however, for his energies were scattered in all directions. The erratic student finds himself in the same position as the superintendent. Fortunately, one can usually overcome poor study habits, but it requires hard work and much practice. That one will be amply rewarded by the results of the higher type of study habits cannot be doubted.

Permit time for pleasure and recreation. Poor study habits are costly in time. The student who cannot concentrate and who cannot focus his attention on the one thing at hand is the type of student who never has the time for necessary recreation. So much of his time is spent in overcoming distractions that none is left for avocational pursuits. It is more often true than otherwise that the best students scholastically assume their share in the extra-curricular activities as well as recreational pursuits. Part of this may be due to the fact that such students have greater capacities and therefore need less time for the preparation of their work. More probably, however, the saving in time is due to the better study habits possessed by such stu-

dents. A number of investigations indicate that the students who do better work are those who have built up better study habits and that the poor student rarely has good study habits. If one enjoys attending the theater and wishes time to participate in social life, let him build up effective study habits.

Good study habits will tend to carry over into life. Undoubtedly slovenly habits of study will tend to affect many other activities in life. If, in studying, one lets the mind wander where it will and thinks about other things at his leisure, the chances are pretty strong that these same tendencies will manifest themselves in making his morning toilet and in his usual daily routine. The average man spends twice as much time in shaving as is necessary. Most of us are not given to analyzing our job to see how many useless moves are made. It is probable that the average woman could shorten the time she spends in washing dishes by one-half if she would only try. The habit of moving slowly and working at half pace is easily acquired. The extent to which half-hearted attempts to study carry over into life activities is not definitely known, but that they have a tendency to do this no one will deny.

There appears to be a rather high correlation between scholastic achievement and success in life. This has been demonstrated in a number of studies. Mr. W. T. Foster ¹ made a study of the college graduates of the class of 1894 at Harvard University. He asked persons at Harvard who were in a position to know the Harvard graduates to list those whom they considered most successful in life. After the judges had agreed on the twenty-three men who had attained the highest degree of success in life, Mr. Foster consulted their college records. He found that the twenty-three most successful men had made nearly four times as many A's in their college courses as twenty-three men chosen at random. Studies at Purdue University and the University of Oregon also indicate that there is a close relation between success in college and success in life.

¹ Foster, W. T., *The Administration of the College Curriculum*, Houghton Mifflin Company, 1911.

Conditions Favorable for Effective Study. Since the habits of study which a student forms appear to be so important one can well afford to give careful attention to the conditions that tend to favor effective study habits. The more favorable the conditions of study can be made, the more effective the habits formed will likely be. While no definitely set conditions can be said to be the best, undoubtedly certain factors are quite important in effecting a study atmosphere. Chief among these factors are the following:

The effect of the student's physical health on study. Physical fitness is an essential requirement if one would study effectively. Pains and ills, fatigue and drowsiness, lack of exercise, and improper food all tend to reduce the efficiency of study and any one of them in an extreme degree is sufficient to reduce efficiency almost to the vanishing point.

1. **MENTAL FATIGUE.** Psychologists are not sure yet that there is such a thing as mental fatigue. In fact, we do not know definitely what the relation between the mind and the body is, and indeed whether there is such a thing as a mind and a body. However, it is definitely known that fatigue, whether mental or physical, has a material effect upon the efficiency of one's study. This does not mean that one is usually in great danger of overwork. It is not overwork that is most likely to cause fatigue. In fact, some authorities go so far as to question whether there is such a thing as "overwork." Instead, they believe that feelings of "overwork" are due to bad physiological habits, bad atmospheric conditions, or mental and emotional worries. The claim has been made and it is doubtless true that man seldom taps his last reserves of energy. Most of us do not even reach our "second wind," much less our third or fourth wind. That one is not easily fatigued because of work is the testimony of many men. An authority in biological chemistry is a vigorous worker. He not only works at a rapid pace but he works long hours. Yet he says that he seldom experiences the feeling of fatigue. He eats the right sort of foods, gets the necessary sleep, and has sufficient exercise.

2. **THE EFFECT OF FOOD ON STUDY.** Not only does the average person tend to overeat but he does not eat the proper foods. The wrong types of food are conducive neither to good health nor to effective study. One can take rats of the same age and of the same parentage, separate them into two groups and feed one group the same kind of food three times a day, day after day, and all efforts to tame them are likely to be unsuccessful. On the other hand, if with the other group one varies the food, his attempts to tame them will be amply rewarded. With the proper attitudes of friendliness and petting the time will arrive when the trainer can put his hand in the cage and play with those whose food is varied. This will not be true of the other group. The rats in the group where there is not variation in food will continue to bite and scratch. Their disposition grows worse instead of better. Apparently, then, there is a direct relation between the food we eat and our attitude toward others. Our whole outlook on life is colored by our diet. One who is moody, and who is more or less "sour on the world" will seldom have a strong mind-set for study. It is probably not exaggerating to say that there is no more important factor in effective study than the food we eat.

3. **SLEEP, EXERCISE, AND FRESH AIR.** That a lack of sleep and exercise affects study is self-evident. Sleep is one of the best nerve sedatives one can get. Exercise helps use up the surplus energy, and brings a needed change of oxygen into the lungs. The air in the study room should not only be fresh but it should also be moving. In fact, one of the most scientific attempts to measure the effect of ventilation has indicated that when air in a room appears foul it is probable that a stirring or moving of the air in the room is needed more than a change of air. In other words, apparently air does not become foul as easily as we have supposed if we keep it in motion. It should be mentioned here that when we speak of the effect of air and humidity on study, a comparatively long exposure to such conditions is considered. For short periods one can do efficient work where the temperature is entirely too high or too low and where atmospheric

conditions appear to be bad. Psychologists have shown that for short periods one may work as effectively in a fifty degree temperature as a sixty-eight degree temperature, or in hot stale air as well as in fresh air at normal temperature. No one doubts, however, that such conditions will influence the effectiveness of one's study if he is exposed to these conditions over a long period.

4. THE EFFECTS OF THE EYES ON STUDY. Most people acquire knowledge more readily through the sense of sight than through any of the other senses. For this reason the condition of the eyes is particularly important in effective study. Visual defects soon produce other bodily effects. The occurrence of headaches at frequent intervals in using the eyes is often an indication of physical defects which proper glasses would overcome.

Nearsightedness is a rather common eye defect and is more common to those given to literary pursuits. Myopia—nearsightedness—is rarely found in people who cannot read. “Screwing” up the eyelids is a common habit with people who have myopia.

Astigmatism is another eye defect that causes trouble of vision. This is caused by unevenness in the curvature of the lens or the cornea in front of the lens and is the most common eye defect.

Farsightedness is another eye defect that may cause headaches, but it is one that may be easily remedied by properly fitted glasses.

The student who is anxious to make his study most effective ought to have his eyes examined by a skilled physician. It is quite usual for a person to be unaware that his eyes are defective. Eye defects may be seriously affecting study habits and the individual may be ignorant of what the trouble is. The safest rule to follow is to seek skilled medical advice on the condition of the eyes.

The effect of the student's mental health on study. The effect of the emotions on one's mental condition is far-reaching. The whole field of the endocrine glands is just beginning to be studied, but that they directly affect both the mental and phys-

ical condition cannot be doubted. The endocrine glands have no external outlet. The chemical compounds which they produce are absorbed directly by the blood. Among the most important of these glands are the following:

1. **THE ADRENAL GLANDS.** These are found near the kidneys. In violent emotions such as fear, anger, and worry, these glands are excited, with the result that greater quantities of adrenalin are secreted. Adrenalin thrown out into the blood causes the blood to coagulate more quickly, and the amount of blood sugar in circulation is increased. Temporarily the muscles have more strength. Now, since the adrenal glands are excited by anger, one can readily see how anger will affect directly one's ability to study. Football players have been known to increase the amount of blood sugar under stress of excitement. But while adrenalin increases the blood flow to the muscles, it has an opposite effect on the digestive organs. The digestive organs are deprived of the necessary blood supply with the result that indigestion is almost certain to occur. The effect of indigestion on effective study habits is self-evident.

2. **THE THYROID GLAND.** This gland is located close to the larynx. Its secretion is called thyroxin. Medical science tells us that an over-secretion of this substance causes an increase in the pulse rate and an increase in temperature. Instability and sleeplessness are likely to follow. In the disease called goiter, the thyroid gland is greatly enlarged. On the other hand, if the secretion of the thyroid gland is not sufficient the patient becomes sluggish and his mental processes are slowed down. If the secretion is produced too slowly the patient is likely to become a certain type of idiot.

3. **THE PITUITARY GLAND.** This gland is located near the base of the brain and its secretion plays an important part in regulating the growth of the body. An over-secretion from this gland tends to produce giants and an under-secretion tends to produce dwarfs. A scarcity of secretion in the pituitary gland has a tendency to bring on fatigue easily.

Other endocrine glands have their effect but the discussion

of the three mentioned here is sufficient to emphasize the importance of these glands in building up the proper study habits. Who knows but that a great many students with erratic types of minds are defective somewhere in the proper secretions of the endocrine glands. In view of the fact that anger, fear, and worry so directly affect the secretions of the endocrine glands one should do everything possible to control such reactions. The extra energy released through anger should be channeled in the right direction. It is claimed that clinching the fist, stamping the feet, or whistling, will relieve the pent-up feelings in case of anger, and put the individual in better shape for study. In order that one may be more effective in directing his feelings of anger into more profitable channels, however, the following suggestions by Headley ¹ are given:

a. Resort to anger only when you feel reasonably sure that the object of your dread is genuine. First examine your supposed grounds for anxiety. You may find that there are none.

b. Do not be angry over a situation which you are sure that you cannot remedy or have a part in remedying. To kick against pricks which are inevitable is useless and worse.

c. Wait, if possible, when not sure of yourself. But remember that anger may either wax or wane with waiting.

d. Be sure that your anger is balanced by devotion. You cannot love and hate at once—but anger which is not born of devotion to some cause is a dangerous free lance.

e. Look with suspicion upon all beginnings of anger which are elicited in favor of your personal interests. The defense of your interests may be just, but on the eve of battle you are not likely to be the best judge.

f. Even if disinterested, assure yourself that the cause which you are about to champion is right. It should be right not only in itself but in the largest setting in which your imagination can place it. The prejudice of passion may have narrowed your view.

g. Realize that anger is often met by anger. It is the soft answer which turneth away wrath. On the other hand, it is possible that your anger may arouse anger in your favor instead of—or as well as—against you. Weigh the chances.

¹ Headley, L. A., *How to Study in College*, Henry Holt and Company, 1926, pages 46–47.

h. In any case use anger sparingly. Reserve its use for emergencies with which your ordinary powers cannot cope.

i. Exercise particular caution in its use when self-control is weakened by fatigue, loss of sleep, hunger, illness, or depression.

j. When it is used try to adjust its strength to the situation which demands it. Too little is ineffective; too much is wasteful and ridiculous.

The Importance of Developing a Driving Motive. The motivation of learning and teaching is one of the most important subjects in all school work. Without a strong mind-set, a definite purpose to do the job at hand, study is likely to be ineffective. One can force himself to study but most of the effort spent goes into overcoming distractions and whipping one's self in line rather than into accomplishments. Of course the question of motivation can merely be mentioned here, but the following suggestions are pertinent to the subject.

A realization of the worth of education. Try to realize the value of education. When one is endeavoring to further his scholastic attainments, it is sometimes well to center the attention on the real value of education. In this connection it might be well to read the biographies of men who have had to struggle hard to get an education but who found that the rewards of their efforts paid abundantly. The biography shelves are filled with pages showing how education has lifted men out of a depressing environment and completely transformed them. A fine illustration of this is the study of Montezuma. What education did for him may be partly gleaned by a quotation from Sandwick: ¹

The most convincing proof of the value of education that I have ever known came to me in an address by Doctor Carlos Montezuma before a men's club in Chicago. Doctor Montezuma is a full-blooded Apache Indian who was captured, when a child, from an Indian village in Arizona and who continued to be held as a slave long after negro slavery ceased in the South. With singular vividness and charm he told the story of this early episode and of his subsequent life: how he was sold for thirty dollars to a Chicago artist who happened to be

¹ Sandwick, Richard L., *How To Study and What To Study*, D. C. Heath and Company, 1915, pages 12-14.

traveling on the frontier; how he was brought East and sent to school; how he, formerly a nameless young savage, passed through the grades of the elementary and high schools, entered college, and, after graduating there, finished a course of medicine in a professional school.

The government at Washington then engaged his services to visit the western tribes and report upon their condition. He visited, among others, the very tribe from which as a boy he had been taken captive. There he found his people still living under primitive conditions in the wretched little grass-thatched huts that he had known in childhood. His attention was called to an Indian woman, dirty and unkempt, who was cooking at a fire of sticks before her hut, amid a swarm of flies. From the height of his superior education gained in the white man's schools, he gazed upon her. Outwardly he saw that she was unclean; and he knew that within she was the prey to fears and dark superstitions—the ignorant victim of her unsanitary surroundings. She was so wretched an object to look upon, evidently so lacking in feminine tastes and cultured feelings, that as he stood there he found himself wondering whether this woman had a soul.

Presently he learned that she was his own stepmother. Then a feeling of pity for his people, such as he had not known before, came over him. He realized at once that their highest good could be attained only by their entering into the culture of the whites, by learning as he had learned the lessons of civilization taught in their schools. . . .

The speaker was a typical Indian of the far West, squat of stature, with high cheek bones, swarthy complexion, and coarse, thatch-like hair. As he spoke, the wonder of it came to us again and again. Instead of the guttural Indian tongue, scant in vocabulary and pieced out with signs and gestures, he used the most cultured English, enriched as it is by additions from the noblest languages of ancient and modern Europe. It was a distinguished audience that he addressed, representing many of the best families of a wealthy residence district; but it is doubtful whether one of his hearers could have spoken better than he. They marvelled to see what education had done for him. His body was probably little different from what it would have been if he had remained in his primitive home. But his mind and soul—how different were they! How different his outlook on life, his attitude toward the world, his sympathies, tastes, and prejudices! With his scientific studies, there had come to this Indian physician a love of demonstrable truth that made ridiculous the hocus pocus of the medicine man of his native tribe.

It is an education more than anything else that makes us love the things we once hated and hate the things we once loved. Take the roll of *Who's Who in America* and see how many have been university students. Check the list of our most eminent men and see what per cent are college graduates. There is no greater incentive to work at anything than to be imbued with the spirit of service, and certainly education enlarges materially one's capacity for rendering a service.

When it is necessary to learn a subject, try hard to become interested in it. Sometimes certain subjects are required which a particular student may not like. Under such circumstances the tendency will be to slight that subject. This is the wrong thing to do. It should be studied harder than any of the others, at least until after one has given it a thorough trial. For the most part we like least subjects which we know least about. The average person will revel in almost any subject if he knows enough about it. Usually it will be found that interest in any subject will grow with an enlarged vision of the subject. Hence, if one wishes to motivate his study in any subject that he does not like, it is good philosophy to spend an increasing amount of time on it in order to learn more of its interesting aspects.

Try to make attractive the thing to be learned. Attention tends to go wherever the strongest stimulus is. Unless the material at hand arouses interest, attention goes elsewhere. This is why so many pinwheels are made in school while lessons go unlearned. The instinct of manipulation prompts some boy to try his hand. Then the instinct of sociability prompts him to share his joy with others and finally the instinct to imitate causes some other pupil to go into the pinwheel business. Pinwheels, in other words, get the most attention because they more nearly satisfy the inner longings than do the lessons to be learned. When boys make pinwheels in school instead of studying grammar one may be sure that pinwheel making is more satisfying than the study of grammar. In such a situation it is the teacher's job to present grammar in such an attractive light that it too brings real satisfaction to the student.

Where possible arouse motivation through creative education. Motivation usually accompanies self-expression. Every teacher will testify that pupils talk with eagerness when they can do things for themselves. Many of the most progressive teachers today are utilizing this tendency by putting additional emphasis on creative education. The parrot-like reproduction of what the book contains does not tend to motivate, but give a pupil an opportunity to write for himself and there is a real thrill in it. This point is well illustrated by an incident reported by Miller ¹ in which a certain teacher was giving a lesson in meter. The following dialogues occurred:

T. Mary, which is an iambic verse?

M. An iambic verse is a verse that has in it iambic feet. (Mary is a bright pupil; she reflects, mirror-like, the printed page perfectly.)

T. Correct.

T. Mike, what is a trochaic verse?

M. Don't know.

T. Well, why didn't you study your lesson? Sit down. Now don't dismiss it from your mind! Susan, you may answer.

S. I don't know what the question is.

T. Why don't you pay attention! What is a trochaic verse?

S. A trochaic verse is one, is one—(and a touching moist scene is enacted).

T. That will do. Too bad, Susan.

T. Jim, stand up. What is a pentameter verse?

J. A pentameter verse is a verse that has in it pentameter feet.

T. Correct. You did surprisingly well. I am amazed.*

T. Now, Mike. (The book on "methods" says return to the victim.) What is a trochaic verse?

M. A verse that —uh-uh-uh.

T. Sit down, and pay attention. (Mike begins to scribble on a piece of paper. He is commanded sternly to stop it, and is ordered to manifest due respect for his teacher. It happens again and Mike is directed to find the principal's office instantly.)

P. What's the trouble, Mike?

* Jim is quite a wag. He rarely indulges in the habit of study. He is quick at generalizing. He soon caught on to the author's method of building definitions. He saw that an X verse was a verse that has in it X feet. When his teacher picked him out for special recognition he was fully equipped. For X he simply substituted pentameter. He could have substituted jack-rabbit with equal expertness.

¹ Miller, Harry, *Directing Study*, Charles Scribner's Sons, 1922, page 184.

M. Nothing.

P. Where did you come from, Mike?

M. English.

P. What were you doing up there? What was your lesson about?

M. Oh, something about feet; a lot of definitions.

P. Did you prepare the lesson, Mike?

M. No. (The ethical exhortation is omitted. Mike was exposed to an extended dissertation on the value of industry, etc.)

P. Well, Mike! To be specific, what were you doing at the time you were sent out of the room?

M. Writing something.

P. A note to your chum?

M. No, it wasn't that.

P. Would you read it to me?

M. (After gaining his composure, he reads:)

There's metre in accent.

There's metre in tone.

But the best of all metres

Is to metre alone.

(At least a sign of originality in the use of metre in the last line!)

P. Now I shall have to punish you. If you don't get to work and write a few more stanzas you will have to see me at four o'clock.

To anyone who reflects on this parody on teaching it will appear that Mike in his original poetry was the only one of the whole class who was doing real thinking and was prompted by an actual motive.

Means whereby certain school subjects can be motivated. While no one can give a complete recipe for motivating different school subjects, the following suggestions will be pertinent in the subjects to which they are adapted.

1. MOTIVATION IN GEOGRAPHY. As it has been taught, geography has been one of the most difficult subjects in the whole elementary curriculum. Much can be done, however, in arousing interest in this subject by miniature pageants and by making scrap books. Some teachers have awakened a high degree of interest in geography by having children make scrap books of the Far East or of foreign countries. Anyone who knows child psychology will not need to be told that participating in pageants is of tremendous interest to children. A journey to a foreign

land in which each child works out his preparations for the trip, including suggested menus in the different places, and the distance to be covered by boat and train, will help to rouse interest in the study of geography.

2. MOTIVATION IN ENGLISH. Interest in English can be aroused when it is applied more specifically to life situations. Some English teachers have obtained excellent results by organizing commission clubs in which pupils wrote out their applications, presented their literary productions, and wrote themes on subjects of interest to the group.

3. MOTIVATION IN HISTORY. It is one thing to teach history from the history books; it is another thing to act it out. The English parliament may be a dead study to the average pupil as it is presented in the book, but when the class is divided to represent the different parts of parliament, with pupils reproducing what they think the members said on different occasions, it becomes a far more interesting problem. Any teacher could, if she really wished, give pupils a chance to participate in history. In connection with this subject it should be kept in mind that one of the secrets of arousing interest in any subject is by giving pupils the opportunity to share or participate in it.

4. MOTIVATION IN ARITHMETIC. The newer arithmetics today are stressing life situations. Instead of asking pupils to learn the formula for the area or circumference of a circle in the abstract, life situations which involve the use of such formulas are presented. An incident is reported where a certain teacher had trouble in arousing the interest of a particular boy in the circumference of a circle. When, however, he discovered a bicycle in a certain window with one wheel rotating and a sign stating that whoever guessed the distance traveled by this wheel in twenty-four hours would get the wheel, the boy immediately took new interest in finding the circumference of a circle. He startled his teacher one day by asking her how accurately she could give him the value of pi. He was anxious to figure to the nearest inch, if possible, how much the wheel

could rotate in twenty-four hours. In finding the circumference of the wheel he was using pi just as he had been urged to do in the schoolroom, but in using pi in solving the problem of the bicycle he was strongly motivated because he could see a direct connection between pi and a life situation.

5. **MOTIVATION IN HEALTH WORK.** If one wants to motivate children in the study of health it cannot be a foreign, isolated proposition. The making of health booklets, the practicing of health plays, and the acting out of health rules are all helpful in motivating interest in better ways of living.

A Study Situation. There are certain essentials for a good study situation. The external conditions under which one carries on the activity of study should be standardized as much as possible. If one is suddenly thrust into a room where there is a loud ticking clock, he will find the ticking a distraction. For a time it tends to pull his attention away from the thing at hand. After a time the ticking will not be noticed and if the clock is removed from the room the absence of the ticking will prove a distraction. A spider on the ceiling will drop to the floor if a sudden noise is made. Put him back on the ceiling and repeat the noise. The spider will again fall to the floor. If, however, one repeats this process enough times the spider will cease to fall. Now, according to the law of exercise, the more times the spider practices falling the more easily he ought to fall. Instead, however, he will cease altogether to fall. The psychologists tell us that the reason for this is that the noise after a time, just like the ticking of the clock, ceases to be a stimulus. In this particular instance, the spider has become so accustomed to his surroundings that they cease to act as distractions. Many persons testify to the fact that they can concentrate if they are permitted to do certain little acts that they have been accustomed to do. Speakers sometimes complain that they do not think well unless they can fumble their watch chain as they have been wont to do. Some instructors focus their eyes on the window while in the classroom and their thinking seems materially affected if they are deprived of this privilege. In the same way,

almost any stimulus may be made to facilitate the study performance if it once becomes embedded in the study environment. Consequently, one may say that every student ought to standardize his study environment. Not only should he study at the same table, but at the same side of the table.

In the same way, it is quite essential that one have a definite time for study. It is the opinion of the authors that no rule can be laid down as to the best time for study. Doubtless there are individual differences in this respect. One student maintained that he could study best during the hours from two A.M. to four A.M. Most people would not call these the most suitable hours for study. Possibly there is no difference in the hours of the day that are best for study if only one adheres to the same hours every day.

Another element in good study environment is a quiet atmosphere. While one may become accustomed to strong outside stimuli, it is not best to work under such conditions. All unnecessary jarrings on the nervous system should be eliminated. A careful perusal of one's study habits will also convince him that to study in a rocking chair is not conducive to effective study habits.

Business economy also ought to be practiced in one's study. Much time can be saved by this means, in the presentation of material as well as in locating it. Many people find it desirable to use five by eight cards for taking notes on useful topics. They then file these cards alphabetically or in some other systematic form. Such cards become a constant source of reference. As it is often necessary to reach one of these cards, the movement can be made more or less automatically and with the minimum loss of attention. Let just one of the boxes be moved, however, and confusion and lost motions result. The inference, then, is that in one's study situation the filing and placement of materials should be standardized.

How to Study. That no definite written rule on how to study can be given is self-evident. Certain suggestions that will be of aid are mentioned in the following paragraphs.

Budget your time. With the average individual considerable time is wasted, and until one budgets his time and keeps track of how he spends his time he is not aware of what a large percentage is lost. Several studies have been made in this connection. In one college detailed diaries were kept by 100 college students for seven consecutive days, in which they recorded the time given to different activities. This study may not be representative of all colleges, since it was made in a single university, the University of Idaho. The authors of the study ¹ report that there is especially good reason for placing faith in the truthfulness of the diaries. The following shows how these 100 individuals spent their time.

TABLE 8
AVERAGE TIME DISTRIBUTION AS REPORTED BY 100 COLLEGE STUDENTS

FUNCTIONS	TIME		FUNCTIONS	TIME	
	Hrs.	Min.		Hrs.	Min.
Sleep.....	8	20	Recreation.....	2	30
Personal.....	1	25	Religion.....		10
Meals.....	1	35	Shopping.....		10
Work.....		30	Correspondence....		15
Chores.....		30	Dates.....		25
Study.....	3	00	To and from town..		25
Classes.....	2	50	Talking.....		45
To and from campus.		40	Entertaining.....		5
Fraternity.....		10	Miscellaneous.....		5
Extra-curricular....		10	Total hours.....	24	00

While this table should not be held up as a standard it does call attention to the importance of budgeting our time. After time has once been budgeted, every individual should at different intervals check his time to see the extent to which he is staying within the budget.

Make a test of your study habits. The following test of one's study habits may prove of value in trying to get a conception of one's own idea of habits of study. This test was given to a

¹ Goldsmith, Alfred G., and Crawford, C. C., "How College Students Spend Their Time," *School and Society*, Volume 27, page 399.

number of students at the University of Colorado.¹ Miss Strang used it as a preliminary test in teaching her course in How to Study. The test is reproduced here, together with Miss Strang's findings on twenty-nine students who were reported as failing in one or more subjects. Column (a) shows the number of pupils who think a particular technique is best, and column (b) shows the number who use that method.

TEST OF KNOWLEDGE OF STUDY HABITS

Directions: (a) *Put a check before the one answer you think is best.*
(b) *Put a cross before the method you usually use.*

	NUMBER ANSWERING	
	(a)	(b)
1. In reading assigned material in history, the best method is		
...to read the entire assignment once.....	0	11
...to attempt to absorb bodily the whole subject .	0	4
...to try to remember every detail in the lesson...	1	2
...to read it rapidly as a whole and then go over it to pick out important details.....	28	12
2. In general, the best time to read new assigned material is		
...the same time each day for each subject.....	22	5
...any time you feel like it.....	1	12
...sometimes in the morning and sometimes in the evening.....	4	9
...just before the recitation period for that subject.....	2	3
3. In general, the best place to study is		
...at home where the family are sitting.....	0	5
...in a room with friends.....	0	0
...in a quiet room free from noise and other distractions.....	29	22
...on a train.....	0	2
4. The best way to prepare for an examination is		
...to reread all the material covered.....	9	15
...to begin to study hard the night before examination.....	0	5

¹Strang, Ruth, "Another Attempt to Teach 'How to Study,' " *School and Society*, Volume 28, page 461-466.

		NUMBER ANSWERING	
		(a)	(b)
	....to study lecture and reading notes thoroughly .	18	6
	....to reread some of the references	1	2
5.	In studying a lesson in psychology, a good plan is to memorize the facts one by one	0	3
	....to keep each lesson separate in mind from the others	2	3
	....to copy the notes taken in class each day	3	5
	....to connect the important points with some- thing in your experience	19	13
6.	A good method of studying the material of an as- signment, is		
	....to raise questions that may possibly be asked on the assignment	7	2
	....to reread the assignment until every detail is mastered	11	7
	....to read every word of the assignment very slowly the first time	0	6
	....to make a digest of the assignment	10	13
7.	In learning the important facts in a chemistry les- son, the best plan is		
	....at one sitting, to study the facts until you can repeat them from memory	7	14
	....to study them a half hour each day and review at increasingly long intervals	20	4
	....to study them ten minutes every day	0	4
	to learn as much as possible in an hour and "call it finished"	0	5
8.	In reading an assignment in your own book, a good plan is		
	....to copy in your notebook the important points.	6	7
	....to make a detailed outline of each chap- ter	10	7
	....to underscore the important points and to make notes on the margin	3	4
	....to read each chapter carefully once	0	11
9.	To promote a permanent memory of a subject in a form for life		
	....keep a well organized notebook	15	12
	....review the entire subject just before examina- tions	3	9

	NUMBER ANSWERING	
	(a)	(b)
....take part frequently in class discussions and discussions with friends on the subject.....	9	5
....reread the facts until each can be repeated from memory.....	2	3
10. The best way to learn a lesson is to		
....memorize each paragraph just as it is in the text.....	0	1
....learn the material in the form in which you will most likely use it.....	19	16
....get a vague idea of the subject as a whole.....	1	8
....write a detailed outline of the lesson.....	9	4

From these findings it appears, that (1) the best method is a combination of several techniques and (2) there is considerable variance between the methods pupils think best and the ones they use.

Some rules for study. Doubtless the average student will find the following suggestions on rules for study of considerable value:

1. READ AND THEN REFLECT ON WHAT IS READ. In getting a lesson, read awhile and then look away from your book and reflect on what was read. A number of experiments indicate that the student who reads and then looks away and reflects masters much more of the subject matter in the same length of time than if he spends all of his time in continuous reading and rereading. In fact, in some instances one is probably justified in spending more than fifty per cent of his time in reflecting on what he has read.

2. OUTLINE WHAT YOU READ. A good habit to form in study is to take notes on material read. After the notes have been taken, a careful review of these notes, referring to the text only when necessary, will be of value. Note-taking while reading serves a twofold function. It makes it possible to preserve in handy form the contents of the article and at the same time it serves the purpose of effective discipline. It forces one to give attention to what is being read. In this connection it may be said that with such a plan of study seldom should a student have

to read an assignment more than once. One careful reading, with a hasty review of notes taken, should prove sufficient.

3. **TRAIN YOURSELF TO READ RAPIDLY.** Many experiments tend to indicate that the rapid reader comprehends more of what he reads than the slow reader. Rapid reading helps one to concentrate and leaves less chance for "mind-wandering." Definite time limits for reading a particular subject are helpful in forcing rapid reading and better consideration.

4. **SET A PREMIUM ON INDEPENDENT WORK.** The tendency to do something of one's own accord is a strong motive for study. Some students report so much of what the book contains that they hardly realize the value and the thrill of success that comes from doing independent work. It has been said that a university could well afford to throw away all requirements for any student when it is found that he has reached the point where he can do independent thinking. As has been well said, when a student reaches this point it might be marked as the date of his intellectual birth. The habit of independent, original thinking ought to be cultivated by teachers. For the most part, however, we probably urge original, independent thinking in our school-rooms but tend to penalize the student who attempts it.

5. **DO NOT UNDERTAKE TOO MUCH.** Nothing succeeds like success. Therefore, a student who wishes to build up effective study habits must have confidence in himself. Confidence is developed through success. If one wants to train a horse not to pull, the best way to do it is to hitch him to loads he cannot pull. After a while he will lose confidence in his own ability and will refuse to pull the very lightest of loads. On the other hand, if he is never hitched to a load he cannot pull he will develop such confidence that he will attempt to pull any amount of load. So it is with the pupil. Failure is deadening. It undermines confidence. Therefore do not undertake more than you can do, or work beyond your capacity. Tackle difficulties, yes, but difficulties within your capacity to solve.

6. **PLAN YOUR WORK.** Much of our study is wasted because no definite plans for work are prepared. Some of the best

authorities in research have stated that when one is beginning a piece of research work he can afford to spend much more time on planning than he expects to utilize in execution. Definite, well-thought-out plans save time. To have carefully prepared plans one must utilize his imagination. Try to foresee how the results will come out. Anticipate all the activities necessary in the job. In other words, in imagination analyze the job down to its minutest details and then prepare a plan for putting the details into execution. In working out a plan of study one should set up near-goals. Sometimes the ultimate goal of a piece of work is so far removed in point of time that it fails to arouse motive. In such cases near-goals, mileposts, can be set up that will serve to create the needed incentives.

QUESTIONS AND EXERCISES

1. Do you recall any time in your past life when you made a distinct change in your type of study? If so what influences caused you to change?
2. Mention instances where "mind-wandering" proved very costly to you.
3. Make a check of some of your student friends and see if it is true that those who have the best study habits also have the most time for recreation?
4. Is it true that good study habits tend to carry over into life? Is the same true of bad study habits?
5. Collect information on the physical defects of school children. Find what the ten most prevalent defects are.
6. Recall some poor assignments that have been made. Would time have been saved by taking time to make a carefully prepared assignment?
7. To what extent do you think it is true that "Phi Beta Kappa people have an over-secretion of the thyroid gland"? Might one say the same of football players?
8. Make suggestions as to how one might develop a driving motive in some subject that he does not like?
9. Suppose one of your high school pupils complains that he does not have time to prepare all of his studies. Work out a suggested budget for his time which you might propose, assuming that he has no more than the normal amount of outside duties.
10. What values should accrue to a student from the practice of outlining what he reads?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER X

SOCIALIZATION OF INSTRUCTION

The writers can recall a one-room school where three old men sat as members of the school board. For at least three years out of the past five the teacher had had to resign because of his inability to manage the school. The plan had been to select the largest teacher that could be found, on the ground that he would be able to whip the "big scholars" as well as the smaller ones.

The board had again met to consider the problem of selecting a teacher. Force and suppression had been the habit in this unruly school. However, at this particular meeting of the board, certain members of the community took an interest in the selection of the teacher. It was argued that training and not physical strength was what was wanted in a teacher. The result of the argument was the selection of a young lady, rather frail, but with two years of professional training, a dynamic personality, and a dominating belief that the school should be a *social* institution.

The teacher made her appearance and opened school on the first day. When the children had assembled to begin school they were visibly startled by the first statement of the teacher, a statement put in the form of a question. The question was, "Boys and girls, what would you like to do this morning to start this first day of school?" This sounded like a strange way to start school. It was different from the past practice of reading a long list of rules and prohibitory commands. Here was a strange little lady who was so bold as to start the school by throwing responsibility for its procedure on the pupils themselves. Answers came thick and fast. Some wanted to sing, some wanted a story by the teacher, and a few wanted to play

a game. The decision as to what suggestion to accept was not made by the teacher. A vote was taken, the majority decided to sing, and everybody was satisfied—so satisfied that for the first time in that school all pupils entered into the singing with vigor and expression. School had begun, and it had begun with a characteristic that was to permeate it entirely for a whole year—a characteristic that marked the turning point in the destiny of that one-room school. The story need not be pursued further. At every turn the children were impressed with the idea that it was their school. They helped make the assignments, they had something to say as to the schedule, the excursion through the woods, the conduct of the recitation, the school discipline, and many other things. The reputation of this teacher soon spread through the community. Parents wondered what was going on and came to see. They not only visited the school but they took part in the discussion and liberally praised the work of the teacher. It was a clear demonstration that expression and participation, not suppression and force, are the essential characteristics in the life of a school. It strongly indicated what educators have always argued for, namely, that the school not only should be, but to do its work effectively, must be treated as a social institution.

The old type of school procedure seemingly considered education as an individual process. Little attention was given to training the individual in social ways of thinking. Although children have been taught in groups for a long time, it is only recently that any specific attempt has been made to develop the “we” feeling of the school or the class. However, man cannot grow and develop his intellectual powers without association with his fellows. His surroundings compel him to be social. If deprived of the privilege of coming into contact with his fellows, he would soon lose his sense of proportion. In education one must think of the group as well as of the individual as a unit. In fact, the individual, minus his relationship with the group and what he has learned from the group, would be a very peculiar individual.

Not every collection of individuals can be thought of as a group. If one could conceive of a gathering of a number of individuals every one of whom was interested in something wholly different from the others, it would be wrong to think of them as a group, and especially as a social group. On the other hand, if one should think of a collection of individuals whose interests were all much the same so that each member felt himself a part of the group and looked upon himself as responsible for the welfare of every other member, he would find the most desirable type of social group. One of the chief functions of the school is that of developing this feeling of welfare responsibility. Manifestly the old type of school with its attitude of force and suppression did not do this. It thus terminated in the school's being looked upon as a collection of individuals who must be whipped into line. It looked at times as if everybody's hand was against his neighbor rather than for him. If one could drop a brick down the chimney flue and succeed in smoking the whole school out, he was elated because such a feat brought the thrill of success. Often, however, such activities did bring some coöperation. Someone has said that the only time the pupils in the old type of school showed any spirit of coöperation was when they coöperated against the teacher.

What the school wants to do today is to build up a feeling of unity, to develop what the sociologist has called the social mind. The social mind is a unity of spirit that dominates the group. Naturally, in such a group, effort and will are entering into the same thing. The social mind has all the advantages of unity of purpose. In developing such a spirit of coöperation and unity of purpose the teacher should always be aware that the higher group consciousness is to be developed. It often happens that a school can be made to have a strong feeling of unity in problems that concern its own group and still be highly intolerant of other groups. There is always a danger in a feeling of too much nationalism. The danger is that the feeling of internationalism will be forgotten. The remedy in such a case

is the development of a higher group consciousness, the feeling that in the long run the thing that is best for the whole group will prove best for the smaller individual groups. Any teacher who realizes the importance of the social mind will take steps to prevent class consciousness from becoming so strong that the school consciousness is pushed into the background. Since, then, there seems to be a strong realization that one of the major functions of the school is to socialize the individual, let us turn to a consideration of some of the things the modern school is doing as a means of accomplishing this purpose.

Recognition of the Conditions That Make for Socialization.—

Freedom of communication. Among the conditions that make it possible to develop a like-mindedness within the group is freedom of communication. In the larger social group this involves such characteristics as freedom of the press, freedom of speech, and freedom of discussion. The failure to provide for this freedom has proved one of the great weaknesses of the traditional school. The question and answer type of recitation does not permit freedom. It usually means that the pupils are not free to ask questions, nor are they free to answer them, since answers are usually expected to be given in exact accordance with the text. In how many schools today can one find freedom of communication? Certainly a school where whispering is looked upon as a crime cannot boast of freedom of communication. Where pupils must get permission from the teacher every time it is necessary to go to the dictionary and look up the meaning of a word there is no freedom of communication. A school where pupils are not permitted to work with each other and discuss their common problems does not have freedom of communication. Finally, where it is not possible for pupils to consult the teacher, or to offer suggestions about what they consider the vital interests of the school, one does not find freedom of communication. That we are tending to move in the direction of freedom of communication, however, may be seen from the freedom with which our democratic form of government is criticized. On every hand, however, we find evidences

of the fact that we must still go a long way before we shall have freedom of communication and discussion. One of the authors has frequently asked the pupils in one of his classes these two questions:

1. Do you believe that an individual should be permitted to cut out portions of the constitution of the United States, have these portions printed and then distribute them through the mails in order to show that the constitution is unfair to certain groups and that in consequence it ought to be modified?

2. Do you believe that (barring certain ages) any controversial subject should be dragged out into the open and discussed, no matter how immoral it may be considered by a part of the group?

The answers to these two questions indicate that the student who believes in freedom of communication and discussion is an exceptional individual. But freedom of communication is essential in a democracy. If the theory of organic evolution is bad, let us not try to suppress, but throw the light of discussion upon it so that those who now hold false opinions can be convinced of the errors of their ways. The teacher should not only permit controversial questions to be discussed but also she ought to see that the arguments for both sides are fairly and truthfully presented.

Suggestion. For the most part this term refers to intellectual stimulation, whether unconscious or fostered. The school is specifically intended to stimulate thought and communicate ideas. A mere suggestion of the right kind given at the right time may be sufficient to start a boy on the road to an intensive study of history, or it may be sufficient to drive him from school forever.

Radiation. A mob is usually a mob because of sympathetic radiation. Few lynchings, probably none at all, would ever take place if it were not for a radiation of feelings. The school utilizes radiation in its athletic yells, its feelings of loyalty, and its cultural levels.

Imitateness. Imitation dominates the life of the child. Even the teacher to a very large extent imitates her former teachers. Children imitate each other. One unruly boy may get many others to follow him just through imitation. Let one boy shoot spit-balls at the ceiling and very soon one is likely to see others engaged in the same business.

Aggregation. Physical contacts tend to produce a community spirit and a "we" feeling. Let a group be marooned and a community feeling is likely to develop in a very short time. In the same way pupils who are housed under the same roof or within the same schoolroom are apt to have a social group feeling for one another.

How the School Is Being Socialized.—*Through a socialization of school activities.* The feeling is growing that if people are ever to get along together and work for each other's common interests, they must practice such habits in schools. Children cannot be trained to live the individual life in home and school and then be expected to be socialized when they get out of school. To learn anything one must somehow practice that thing and this is just as true of the things that make up the socialized individual as it is of learning the combinations in arithmetic. For this reason serious attempts have been made of late to put the school on a socialized basis. The avenues through which the activities of the school are being socialized are three:

1. THE SOCIALIZATION OF THE INDIVIDUAL THROUGH EXTRA-CURRICULAR ACTIVITIES. Extra-curricular activities have many values but none of their values are considered more important by educators than those which have a socializing effect. Among the socializing effects from a participation in extra-curricular activities one may mention the training received in right moral relationship, training through coöperation, training for leadership, and the actual experience in group life.

Any students who participate in extra-curricular activities will benefit through their moral influences. In athletics every

good player learns to deprive himself of the opportunity to win the plaudits of the crowd sometimes in order to be fair to the team. He learns to stick by the group, and to work hard without thought of personal glory. When he deprives himself of the pleasure of smoking, of eating certain things for which he has a ravenous desire, and of other social life in which he would like to participate, he is receiving a moral training that may prove of immense value. A student who participates in a play may find himself assigned a part that he does not like. He would much prefer to have a star part but he cheerfully submits to the part assigned him and is thus getting practice in coöperating for the good of the group.

The training in coöperation stands out in almost every type of extra-curricular activity. The coöperation through club activities, through class organization, through social activities, through the assembly, and through athletic activities is manifest on every hand.

The actual training and experience one gets by taking part in group life, through extra-curricular activities, is by no means negligible. Extra-curricular activities are almost always group activities and the more they are counted as life activities the more the individual will profit by the experience in the group life. Children in the rural field tend to live a life of isolation and individualism, and for them the participation in group activities is especially valuable.

In considering the social values of extra-curricular activities, mention should be made of their training for leadership. Some schools have a method of rotating the leadership in extra-curricular activities so that every pupil is given a chance to hold office and assume responsibility. No one will deny that the responsibility of having to conduct the group meeting in perfect parliamentary order, or the defending of one's ideas on the floor, or the standing before the crowd and giving his part in the play, or assuming a part in the oratorical contest, or acting in the capacity of one of the debaters, offers excellent training for leadership.

No extensive discussion of extra-curricular activities can be given here, but it will not be amiss to call attention to a few of the activities which are being conducted in some schools. Among the extra-curricular activities that have large socializing values are:

a. The club. The value of club life and its relationship to the school may be seen by the way it is handled in the Washington Junior High School, Rochester, New York. According to one of the bulletins from this school the pupil at the beginning of the term chooses three clubs in which he would like to participate and at the same time he tells why he has chosen them. If possible, a pupil is given his first choice, if not, he may get his second or his third choice. The clubs are self-supporting and are intended to educate the pupil as well as to introduce him to the life of the school. This high school alone has sixty clubs. Among these are the Airplane Club, the Bird Club, Debating Club, and Radio Club.

Teachers and principals who are responsible for club life should bear in mind that it cannot be forced. Each club should have a faculty adviser but if the pupils are not allowed to set up the objectives of the club, adopt its constitution and by-laws, and be responsible for its activity in general, its socializing educative effects are greatly curtailed. In order to make sure that the club life is a success, it would be well to release teachers from a part of their teaching load in order that the duties of the club sponsor will not be overlooked.

b. The assembly. The assembly is the place where pupil responsibility should be keenly felt. Assemblies are being organized more and more around the pupils. In the first place it is the open forum where the policies of the school are discussed. Here the pupils and the faculty iron out misunderstandings and are permitted an opportunity to express their views. It is in the assembly where all meet to hear an outside speaker, to have their pep meetings, to work out plans of organization, and to discuss the general welfare. In some schools two periods during the week are given over to the pupils to conduct their programs.

On a certain day the senior class is responsible for the program, on another day the junior class, then the sophomore class, and then the freshman class. In conducting the programs there is not only a feeling of coöperation but there is a feeling of responsibility as well.

c. Athletics. Some of the educative effects of athletics have already been mentioned. It should be said here, however, that there is considerable doubt as to whether athletics at the present time yield a maximum contribution in socializing values.

In the first place, too few pupils have in the past been permitted to take part. Every school wants a winning team and in order to have this a few individuals are selected and intensively trained. The others are expected to sit on the side line and cheer for the team.

In the second place, the spirit of athletics is sometimes so intense that the spirit of toleration is forgotten. Also sometimes the competitive spirit is so great that coach, players, and even the student body wink at unfairness and the breaking of rules in order to win.

It is sometimes claimed, also, that scholarship suffers as a result of such keen interest in athletics. If so, this is largely the fault of the school. There is considerable evidence that scholarship need not suffer in order to carry on athletics successfully if the faculty is willing to insist on high scholarship.

It was with a view to correcting some of the evils of athletics that a committee of the American Association of University Professors was appointed in 1926 to study conditions relative to intercollegiate football and make appropriate recommendations. The findings of the committee were in part as follows:

1. For the undergraduate body football has three great advantages: ¹
 - (a) It affords a recreation so absorbing as to dispel for the time being whatever mental weariness and anxieties the week may have brought.
 - (b) It creates a strong sense of common interest.

¹ *Bulletin of the American Association of University Professors*, April 1926, Volume 12, Number 4, pages 222-234.

- (c) It affords for the entire football season a clean and interesting topic of conversation and of thought.
- 2. For the undergraduate body football has two great disadvantages:
 - (a) The over-excitement about football which prevails through the autumn.
 - (b) The consequent distortion of values which prevails continuously.
- 3. Other disadvantages of football are:
 - (a) Its tendency to give occasion for drinking.
 - (b) Its encouragement of betting.
 - (c) Its provocation of dishonesty in various respects.
- 4. For the players the advantages are:
 - (a) Valuable training in discipline.
 - (b) The learning that the adequate performance of a difficult task demands long and exacting preparation.
 - (c) The training received in coöperation.
- 5. Disadvantages to the players:
 - (a) Over-excitement.
 - (b) Distortion of values.

While the findings of this committee had to do with intercollegiate football only, they are doubtless applicable to athletics in general and apply to football in the high school as well as in the college.

Recommendations that have been made whereby the good qualities of intercollegiate football might be retained without retaining its disadvantages include:

- 1. That participation in football by any one player be limited to one year.
- 2. That only four games be played each season, each game with a team in its own class and in its own vicinity.
- 3. That no coach be paid a salary beyond that of a professor.
- 4. That coaches not be allowed to sit on the players' bench during the game.

While the recommendations made here may not be accepted, and in fact may not even be a movement in the right direction, they do serve the purpose of calling attention to the need for a more critical evaluation of the whole field of athletics. A careful chart of the values and weaknesses of athletics needs to be made. A step in this direction has already been made by the Carnegie

Foundation for the Advancement of Teaching. This study, which was formally authorized by the trustees of the Carnegie Foundation on January 8, 1926, was based on a questionnaire study as well as on personal visits to 130 schools, colleges, and universities in the United States.

One of the questions discussed in this report was the causes leading undergraduates to participate in athletics. Among these causes are: (1) inheritance, (2) school requirements for physical education, (3) enjoyment, (4) college opinion, (5) the desire to enter the ranks of professional players, or to become a coach, (6) payment for participation sometimes received.

Among the results of participation in athletics this study mentions some that are immediate and others that are deferred. Among the immediate results are mentioned physical effects, effects on scholarship, rewards such as numerals, and moral qualities. The deferred results, of course, are not so definitely known as the immediate results. "Letter men" appear to have a somewhat higher mortality rate than others and the athlete generally prefers watching games after he has graduated, rather than participating in them. Academic success appears to be a better index of business success than does success in athletics. Other topics discussed in this study include:¹ The Hygiene of Athletic Training, The Coach in College Athletics, Extra-mural Relationships, The Socializing of Athletics, and The Growth of College Athletics. In spite of the comprehensiveness of this study, however, much remains to be done before we are fully cognizant of the values and weaknesses of athletics.

d. Social activities. Some school authorities hold the view that it is the school's business to teach educational activities but not social activities. This point of view is rapidly being replaced by one that holds the school directly responsible for social development.

Social relationships and social contacts through dancing, parties, and various recreational activities are developed by

¹ "American College Athletics," *Bulletin Number Twenty-three*, Carnegie Foundation for the Advancement of Teaching, 1929.

the school. Beach parties, picnics, and excursions are no longer frowned upon. It is recognized that young people in the high school will have social contacts in one way or another. Either they will be supervised by the school or carried on as unsupervised activities in spite of the school. The more leisure time that is provided in life, the greater will be the need for the school to teach and initiate social activities. The time may come when credit will be given for tennis, croquet, horseback riding, dancing, and the like just as well as for music, painting, or sewing.

2. **SOCIALIZATION THROUGH CURRICULAR ACTIVITIES.** The curriculum is being made a vehicle for socialization in two ways:

a. The social science subjects are being made the core of the curriculum. It is through a study of the social sciences that the mores and folkways of a people are being given additional emphasis and attention. The mores, folkways, and social codes make group change very difficult. This is one reason why education of the group is a slow process. However, if pupils are to be taught to get along with each other and with other groups, the mores must be taken into consideration. The school represents a group of children who belong to different religious, economic, and political groups. Each group has its own code and its own ideals. It is the teacher's business to bring these codes into some sort of harmony so that the various individuals will be more tolerant, more sympathetic, and indeed be willing to subscribe to a new school code by means of which the "we" feeling will be developed. It is the social sciences to which we look as the basic subjects for interpreting the various codes and for laying the foundation for a better human relationship. There is no bigger problem in life than that of learning to live amicably and agreeably with other people. The social sciences (history, geography, civics, sociology, economics, etc.) are now being made the crucial part of the curriculum, with the intention of shedding light on this perplexing problem. The result should be a curriculum that is socializing, and the rewards should be prompt and large.

b. The history of education shows that in the past schools have been kept largely away from life. Instead of finding schools

immersed in life situations, children found them foreign and lifeless. A reproduction of the textbook, a formal type of questioning and answering, and a pigeon-holing of the learned material in such a way that it would never be applied outside of the schoolroom, characterized the learning process. The attempt today is to change all this. The content of the school curriculum is being made up of life situations and being taught in its natural setting, so that it actually reflects life conditions. The result is a purposeful learning, and a subject matter that will be utilized in life. The portions of knowledge are presented as projects, problems, and units of work. The school is not only made to reflect the problems of life but its work is made up of problems actually taken from life. As an illustration of what is taking place we call attention here to the work being done in the Lincoln Elementary School of Teachers College, Columbia University.

In this school the curriculum consists of units of work taken from life situations. The criteria for selecting a unit of work have been set forth by the staff of this school as follows: ¹

a. The unit of work must be selected from real life situations and must be considered worth while by the child because he feels that he has helped to select it and because he finds in it many opportunities to satisfy his needs.

b. The unit of work must afford many opportunities for real purposing and real projects, and it will be something which the child can carry into his normal activity.

c. The unit of work must stimulate many kinds of activities and so provide for individual differences.

d. The unit of work must make individual growth possible.

e. The succession of the units of work must provide for the continuous growth from one level to the next.

f. Each unit of work must furnish leads into other related units of work and must stimulate in the child the desire for a continued widening of his interests and understandings.

g. Each unit of work must help meet the demands of society and must help clarify social meanings.

¹Lincoln Elementary School Staff, *Curriculum Making in an Elementary School*, Columbia University, Teachers College, Ginn and Company, 1927, pages 29-44.

h. Each unit of work must be accompanied by progress in the use of such tool subjects as contribute to that unit.

i. Each unit of work must lead to the development of desirable habits.

A careful study of the above criteria convinces one that at the Lincoln School the curriculum is being vitalized and socialized.

To show a little more definitely the plan at this school, a brief description of one unit of work which was done in the sixth grade is quoted here. The name of this unit is, "How man has told and recorded time."¹ This unit of work developed from the fact that one of the pupils was nearly an hour late the next morning after the opening of the daylight-saving period. The pupil asked who had the right to determine the correct time. After some discussion the following questions were asked:

How is the master clock in the Naval Observatory regulated?

When we went to Europe this summer we set our clocks ahead almost every day. We put them back coming home. Where did the ship's officers get the time on the ocean?

Do we have more daylight when the earth is nearest the sun?

What causes the midnight sun?

How long is the longest day in New York? The longest night?

How did primitive people tell time?

In answering these questions, daily observations were made. The pupils began their work on the roof of the school with smoked glasses, old kodak films, and compasses. The children soon found that they needed to know such terms as celestial sphere, zenith, altitude declination, degrees. They watched the sun's path across the sky and they soon knew what was happening in the night sky. The moon and the planets came in for their share of discussion and study. Some of the activities in which the pupils engaged while studying this unit include writing creative poems and plays, using compasses, telescopes, and pendulums, making a monthly chart for school bulletin board, a stamp chart with modern stamps of ancient countries, making a zodiac calendar, painting pictures of sun-gods and constellations, and making many observation trips.

¹ *Ibid.*, pages 220-237.

Analysis of this unit in terms of subjects of study shows that the class learned to spell words, to write compositions, to read, and to paint. They learned history, science, geography, mathematics, physical education, music, and industrial arts. It is a fine illustration of how the curriculum can be socialized and vitalized. No doubt children did the work involved in this unit with a strong purpose.

3. **SOCIALIZATION OF INSTRUCTION.** The traditional quiz and answer type of recitation was not conducive to socialization. Spontaneity, initiative, and coöperation were lacking. Pupils seldom asked questions and seemingly possessed no eagerness for learning. Consequently there came into being what is generally termed the "socialized recitation." The socialized recitation is not a panacea for all the ills known in the recitation, nor is it a cut and dried procedure that a teacher can adopt at will and make a success under all circumstances. Its success depends very largely upon the training and experience of the teacher. It is simply an attempt to inject freedom, initiative, spontaneity, and coöperation into the recitation and thus make the recitation more like a life situation. As ordinarily conducted, the socialized recitation may be thought of as the formal type where officers and committees are appointed, or the informal type where it is much like the regular discussion type of lesson with additional emphasis put upon all the factors that tend to make for socialization.

If the formal type is used it should be in a limited way. There is no occasion for a great many committees nor does there need to be a constitution and by-laws. A chairman is necessary, of course, in order that speakers may be recognized, and a systematic procedure be assumed. The writers have found it advisable also to have a critic whose business it is to keep a sort of perpetual inventory of aims and also for the purpose of checking discussions too far away from the point. It is the critic's business to throw the discussion back on the track when it wanders too far away. Then there should be a summarizer who will summarize at the close of the recitation what has

been done, and who will state just where, in his opinion, the class engaged in lost motion. Usually these will be all the officers needed. The plan of rotation in office should be followed.

Every pupil should be encouraged to assume his share of the responsibility, but not to try to monopolize the recitation period and thus deprive the other fellow of his opportunity. In all socialized recitations the discussion should be marked by adequate motivation, a simple machinery adapted to the purposes and a responsibility shared by all.

The informal type of socialized recitation has neither officers nor committees. The teacher almost always acts as chairman, and the change from the old class type over to the socialized recitation is gradual. The class discussion is more in the hands of the pupils, freedom and naturalness is more pronounced, and the teacher refrains from too much talking. The teacher will be on the alert, however, to keep the discussion from lagging, or from wandering too far afield, or from being wasted in a futile controversy. In short, the informal type of socialized recitation has the same earmarks as the formal type, with the exception of the formal machinery which is characteristic of the latter only.

a. What are the values of the socialized recitation? The limited amount of experimental work that has been done on this subject indicates some definite advantages in favor of the socialized recitation. The experiment conducted by Johnson ¹ is typical. In this experiment four beginning classes in high school mathematics were used. Two of the classes (the experimental group) were taught by the socialized recitation method, and two (the control group) were taught by the question and answer method. The experiment extended over a period of twenty weeks.

The author of the experiment has summarized the advantages which accrued to the experimental group as follows:

¹ Johnson, W. H., "The Socialized Recitation in the High School," *School Review*, November 1924, pages 682-687.

1. The pupils in the experimental group were full of enthusiasm. The moral influence of active coöperation was evident. Cheating and deliberately poor conduct were seldom discovered after the first two or three weeks. In the case of the control groups cheating occurred on numerous occasions and up to the very end of the course.

2. The experimental groups afforded the teacher many interesting situations.

3. The results of subject-matter tests which were given at five-week intervals indicated that the pupils in the experimental groups had grasped the subject matter better than the pupils in the control groups.

To the writers' knowledge, no experiment on the value of the socialized recitation has yet been conducted wherein the experimental group did not show a gain over the control group in subject-matter achievement. This, coupled with what is gained through greater motivation, initiative, originality, and coöperation, would seem to argue well for the socialized method of recitation procedure.

Socializing the School through School Control. Doubtless pupil participation in school government furnishes one of the finest opportunities for socialization that one can find. It gives pupils a chance to engage in activities that develop the civic ideals needed in a democracy. It helps train them for adult society and makes for a higher and finer type of personal control.

Most of the failures where pupil participation has been tried were due to the fact that the whole scheme was looked upon merely as a disciplinary measure. If it did not perform this task efficiently from the beginning, and furthermore if it increased temporarily the troubles of the administrative machinery, it was pronounced a failure. If pupil participation in government is to have a square deal it must be looked at from the standpoint of its educative effects and must not be considered merely a means of disciplinary control. The machinery for its operation should be simple and the participation should be introduced gradually. Its inception should come from within the school rather than from

without. It is important also that the leaders of the movement be of a high type with a clear-cut vision of the worth of the work. There is no place in such a movement for the spirit of cliques and clans.

One of the most exhaustive investigations of the extent to which pupil participation operates in school control is that made by the committee appointed by the National Society for the Study of Education. The report of this committee on extra-curricular activities appears in *The Twenty-fifth Yearbook*.¹ The work of the committee included an analysis of fifty published articles dealing with pupil participation in school government, together with the tabulation of the data from a questionnaire sent to three hundred junior and senior high schools in the United States. Replies to the questionnaire were received from 191 schools, representing all sections of the country and forty different states.

The findings of the committee indicate that approximately ninety per cent of the high schools in the United States claim they are making an effort to try pupil participation. Nearly one-half of the schools have been trying it three years or less. In the schools replying both pupils and principals agree rather strikingly on the following:²

1. Student participation is successful and a worthwhile feature of the school.
2. It promotes worthy citizenship.
3. It is an aid to school discipline.
4. It promotes school work and school spirit.
5. It tends to develop a coöperative spirit between faculty and students.
6. It develops responsibility and a respect for law and order.

No one can seriously doubt that there are great educational values in permitting pupil participation in school government. If rightly conceived, its socializing value as well as its contribution to a better type of school discipline and school morale should prove quite gratifying.

¹ *The Twenty-fifth Yearbook of the National Society for the Study of Education*, 1926, Part II, Chapter XI, Public School Publishing Company,

² *Ibid.*, page 138.

QUESTIONS AND EXERCISES

1. Give suggestions on how school discipline might become socialized? Is discipline any more socialized when under student control than it would be under faculty control?
2. What are the dangers in high school clubs? Would high school fraternities be of aid in socializing the school? Why?
3. If a student cheats on an examination and all the other members of the class know about it, what should they do?
4. Give suggestions for building the social mind. Are there any dangers to the school in building up the social mind? If so, what are they?
5. Give illustrations to show where in your observation sympathetic radiation affected school conduct.
6. List what you consider the major evils of football today and give suggestions for correcting these evils.
7. Should coaches be paid on the same basis as other members of the faculty? Why?
8. Is a school more likely to be socialized where the curriculum is based on projects rather than on isolated subjects? Justify your answer.
9. What are the arguments for and against conducting university classes on a socialized recitation basis?
10. Is the sorority and fraternity a help or a hindrance to socialization?
11. Are our high schools and colleges over-organized? Are extra-curricular activities essential for good school morale?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

PART III

THE SCHOOL—ITS ADMINISTRATION
AND SUPERVISION

CHAPTER XI

SCHOOL ORGANIZATION

The schools of a nation are usually spoken of as a national system. The schools of Germany are referred to as the German system of schools, those of France as the French system, and those of the United States as the United States system. In the United States, however, the system is vitally different from those in Germany and France. This chapter deals with the organizational phase of American schools. Almost all European school systems are of the parallel type, while the system in the United States is of the ladder type. Since the World War some of the European countries, including Germany, are organizing their schools more along the ladder type. In most of the European countries, however, the children of aristocratic parents go to one school and the children of the common people go to another. There is more or less crossing from one school to the other, but for the most part where the parallel type exists the lines are quite distinct. In the United States the public school system is looked upon as a melting pot where the rich and the poor and the high and the low are expected to mingle. In such a school, it is the expectation that every child will have the privilege of climbing as high educationally as his capacity will permit. This is the theory. There is, of course, considerable variation from this in actual practice.

Another difference between the organization of European systems and that of the United States is in the degree of centralization. Some of the European countries have a national system of schools. That is, to a very large extent the schools are planned and managed as a national unit. This is not so in the United States. The constitution of the United States

implies that the schools shall be considered as a distinct state function, operated and managed by the state.

Education is considered a state function in the United States. That the tendency to consider education as a state function is strongly embedded in the minds and hearts of the American people may be seen in the opposition hurled against recent educational bills which were written with the intention of placing a Secretary of Education in the President's Cabinet, and transforming the United States Bureau of Education into a Department of Education. Bills in Congress tending toward these changes have been introduced periodically for several years, but most of the discussion against them culminated in the attack on the Sterling-Reed Bill. This bill was originally called the Smith-Towner Bill. Later it became the Towner-Sterling Bill, and still later the Sterling-Reed Bill. The Sterling-Reed Bill was introduced in the Senate in 1923, and, as indicated in the Bill, was intended to create a Department of Education, to authorize appropriations to carry on the department, to authorize the appropriation of money to encourage the states in the support of education, and for other purposes. It should be noticed that nothing is said here about taking away any of the rights of the state as an educational agency, nor is there any inference that the right of the state to manage its own schools would be questioned. On the other hand, the bill specifically stated that the appropriations were intended to encourage the state to do its job better and on a higher plane. Many fine arguments were advanced in favor of this bill. Among them were the following:

1. The educational inequalities between states are so great that the Federal government should participate in the support of schools.
2. Only by means of a Department of Education can the educational needs of the nation be adequately placed before the American people.
3. Such an agency is needed to integrate the educational forces of the nation.

4. A Department of Education is needed to represent the people in the solution of international problems.
5. A Department of Education is needed to give the tone and dignity to education that it deserves in a democracy.

In spite of the excellent arguments advanced in favor of this bill it was defeated. While many causes contributed to its defeat, the most influential cause was undoubtedly the feeling on the part of many that it meant strong centralization and what might ultimately lead to taking away some of the rights of the state to manage and organize its own school. Therefore the reader of this chapter should fix strongly in mind that education is a state function in the United States. That is not only the belief held by the American people, but has been so construed by the courts. In a discussion of school organization, then, one should turn to the state as his starting point.

There is considerable overlapping of what is termed school organization and school administration. In many ways the two overlap until there can be no definite allocation in these functions. Perhaps the best way to show the distinction between them is to think of the plan by which the agents of authority are guided in their work as the organization, and the activities by which the authorities carry out the plan as administration and supervision.

The plan, then, for the functioning of a school system will be called school organization, and any activities performed in the construction of a school plan or the revising of plans will be a part of school organization. When one begins to think of school plans he will readily see that he has a complex situation. He may think in terms of a state plan, a county school plan, or even a lesson teaching plan and still be dealing with school organization. Not only that, but plans must be drawn up for the allocation of school activities and thus one is brought into the field of the relationship of different school officials, a field bordering very closely on school administration. It will be well, then, to turn at once in this chapter on school organization to a discussion of school plans.

The State School Plan. The source of authority in any state school plan is the people. The constitution of the state may have suggested a state school system, but the details of the plan are likely to be left in the hands of the people of the state. It is usually true that the people of a state do not as a whole pass on educational plans. The usual procedure is to delegate authority to representatives of the people. It often happens, though, that some particular part of the plan will be referred to the people for the judgment of the electorate. In such cases an educational campaign will be conducted in an attempt to inform the people of the worth of the proposals so that they can more intelligently make decisions. In all cases, it should be kept in mind that the real authority is with the people of the state, and that any authority possessed by educational workers or legislatures is delegated authority. One may ask, then, whether in the last analysis it is the legislature that works out the plan in accordance with the constitution. It is not. The legislature as such does not possess the professional training necessary to work out the details of a state educational plan. The job of the legislature has usually been to pass on the plans that are proposed by educational experts. With the exception of suggestions in the state constitution relative to plans, this is the way almost all educational progress has been made. It is not the state legislature which proposes a junior high school or a consolidation law, but the educational authorities, the specialists in these particular fields.

The plans for state school systems are quite similar in the different states. This is partly due to the fact that the constitutions lay down the basic lines for the development of a state system and partly to the fact that the history of education or the evolution of the state system is much alike in all states. In practically all the states there has been a slow trend from a district basis to greater centralization. In the early history of the states there was a strong feeling of local authority or control. This extended to nearly every school activity from the licensing of the teacher to the kinds of textbooks used and

length of school term held. Gradually, however, many of the activities passed from the hands of local control over to the state. In most states today the local districts are not free to erect any kind of building they desire; they cannot certify teachers; they cannot have just any length of school term they like; they are not free to select whatever textbooks they wish; nor are they free to decide what subjects shall be offered in schools. In other words, the history of education in the various states of the United States shows a tendency toward state centralization all along the line, and more and more the districts are brought to realize that any power they possess is delegated by the states and will be granted only so long as the districts remain within the good graces of the state.

Since, then, any school district in the state is a part of the state system, the state school or organization plan should be well understood.

The state board of education. Usually the state constitution provides that there shall be a state board of education whose chief business it is to represent the people of the state in educational matters. In some cases the composition of this board is definitely stated in the constitution, but usually it is not. In some cases the board members are definitely determined by law and are ex officio members. Still other states permit the board members to be appointed by the governor or some other agency. From the standpoint of selection, state boards of education may be classified as ex officio, appointed, elected, or mixed boards. Kentucky's state board of education is a good illustration of the ex officio type. The members of the state board of education in Kentucky are the State Superintendent of Public Instruction, the Secretary of State, and the Attorney General. Eight other states, Colorado, Florida, Mississippi, Missouri, Nevada, North Carolina, Oregon, and Texas, have similar ex officio boards. The state board of education in Maryland represents the appointed board type. Here the board consists of seven members, each appointed for a term of seven years. In New York the legislature elects the state board

of education. There are twelve members of the board and each member serves for twelve years. A mixed board is one having some members ex officio and others appointed. An illustration of such a board may be found in Kansas, where six of the nine members of the board are ex officio and the other three are appointed by the governor. Another good illustration of the mixed board may be found in Indiana.

The number of states not having a state board of education in 1925 was six.¹ These states were Iowa, Nebraska, Ohio, South Dakota, Illinois, and Maine. It will thus be seen that in practically every state the state school plan calls for a state board of education. The functions of all state boards of education are largely administrative and are discussed elsewhere in this text.

The chief state school official. In every state in the Union there is in the educational machinery an office of the chief state school official. New York was the first state to establish such an office. Now however, it is considered by every state in the Union an indispensable part of its educational organization. The history of many states shows that the attempts to establish the office of chief school official were hard fought. The opposition was primarily due to the idea of state centralization. The establishment of the chief state school office has been made in two ways: by constitutional enactment, and by statute. In thirty-three of the states the constitution makes provision for the office, while in fifteen states there are only statute provisions. In those states where constitutional provision is made, the establishment of the office is not only mandatory but also the official designation of the office is stipulated, and the method of choosing its incumbent and length of term is also provided for. Some of the state constitutions even fix the salary and the qualifications of the chief school officer. Constitutional provision for the office has its advantages and disadvantages. Probably the greatest disadvantage is in the difficulty of amending the

¹ Schrammel, Henry E., *The Organization of State Departments of Education*, The Ohio State University Press, Columbus, Ohio, 1926, page 7.

constitutions in order to keep up with modern progress. Educational progress and demands are apt to outgrow the ideals set out by our forefathers who wrote the constitutions. This is especially true with reference to compensation and tenure. For example, the chief state school official in Indiana can be elected for a two-year period only. This provision on length of term is written in the constitution and is often the reason why the most competent men do not seek the office. Any man who has a clear vision of educational progress knows that he cannot hope to carry out and complete important educational policies in two years; and since he has no assurance of a second term he is not willing to accept the office at all. Yet the two-year term remains because of the reluctance of the people to revise the constitution.

The chief school official does not always have the same designation in the different states. He may be termed superintendent of public instruction, superintendent of common schools, commissioner of education, secretary of the state board of education, or superintendent of schools. Whatever his title, his duties are much the same in the different states. He is the executive head of the state school system and it is his business to carry out the wishes of the state board of education. As the board's chief executive he is more or less responsible for the state adopted textbooks, for the shaping and revising of courses of study, for the certification of teachers, for the oversight of school buildings, for the distribution of state school funds, for the general supervision of the lower school offices such as local school boards and superintendents, for keeping account of attendance and records, and for the general tone and morale of the whole state school system. Of course it is impossible for any one individual in a progressive modern state to attend to all of these things personally. Consequently the chief state school official usually has many subordinate helpers. Some of these helpers may be giving their full time to the supervision and inspection of the high school field, others to the keeping of the attendance records, and still others to fulfilling other

functions. Usually these helpers together with the chief state school official are spoken of as comprising the workers in the state department of education, and they together with the state board of education draw up the plan for a state school system. The chief executive of the plan is of course, the chief state school official. The extent to which the state's ideal of education will be lifted is very largely determined by the type of man holding the chief school office of the state. Unfortunately the salaries paid in many of the states are not sufficient to secure the best qualified men. Moreover, few states require any legal qualification other than age and residence, and since in a great many states (thirty-one at the present time) the superintendent is elected by popular vote, it means that the best politician rather than the best professional leader generally gets the job. In those states where the chief state school official is appointed by the governor or the state board of education, this does not operate to such a large extent.

Districting the states. Although the state is expected to have, and does have, a state school system, it is practically impossible for it to operate as a single unit. As a whole it is too large and unwieldy for careful oversight. Consequently, the state is divided up into smaller units called districts. These districts are not independent units with freedom to do as they please. In fact, they have no power at all except the power which is delegated by the state. They are educational units organized by the state, and are to function as a part of the state school system. They can be continued, revised, or eliminated, just as the state sees fit. At the present time no one knows which type of unit is best for the state to use in carrying out its plan, nor does anyone know the size of unit that will function most efficiently.

The units usually used within the state are referred to as the county district, the township district, and the one-room district. All of these districts are much alike in their plans. All of them have plans of organization patterned very much after the state plan. All have local boards, usually elected by the people or ap-

pointed by the people's representatives. These boards usually elect or appoint a chief school official (although in the one-room district the appointing power is probably limited to the appointment of the teacher). In most respects such districts function as independent units, except that they are always a part of the state school system and can function only where the state has delegated authority to them.

In the United States there is quite a strong feeling on the part of the people that much of the power to determine the conduct and management of their schools should be delegated to them. Consequently they usually demand that the state keep the district unit small so that it will be the easier for the voice of the people to be heard. It is safe to say that, generally speaking, in every state of the Union people fight centralization tendencies. If the state wants fewer units, or small districts consolidated into larger ones, there is usually an objection on the part of the people in the smaller districts and the cry, "Our schools are being taken away from us," is heard on every hand.

1. THE COUNTY DISTRICT. It is difficult to know when the county district is strictly a county educational unit. The county district as an educational unit of the state is used:

a. Where the whole county is included in the educational unit for all purposes. In such cases as in Alabama, all cities and towns are included in this unit. Only one board is elected and only one school superintendent is appointed. All schools in the county have one chief executive head and all state reports pass through one source. In a strictly literal sense this is the only way that the term "county unit" should be used. In this type of county district the county board is usually elected or appointed from the county at large. This board then appoints the chief school executive of the county, usually called the county superintendent of schools.

b. Where the whole county is included for certain educational purposes only. An illustration of this will be found in Indiana, where the county is the unit only in the sense

that all reports to the state department of education must pass through the county superintendent's office. The state deals only through the county, yet there are besides the "school county" both "school townships" and "school cities" within the county. In most respects, though, the "school county" is disregarded in this state, since the whole county as such is composed of school townships and school cities within the county. The trustees of the townships function together in appointing a county superintendent of schools, but only in a few instances do the county boards function as such.

c. Where the school county is that part of the county not included in city districts. In such cases as referred to under this heading the cities are independent districts and deal with the state department directly. The county school system has its own board and county superintendent and each city has its own board and city superintendent. The Kentucky schools are an illustration of this type of county unit.

2. THE TOWNSHIP UNIT. State school systems having the township as a unit are found largely in the Middle West. When the township is the unit there is usually only one man elected on the school board and he is referred to as the township trustee. He is not the superintendent of schools, but is a member of the county board of education, which in turn elects or appoints the county superintendent of schools. However, in most states where the township is the unit, it will be found that the township trustee performs many of the functions ordinarily performed by the superintendent of schools. He is responsible for repairing and constructing school buildings, for hiring, promoting, and demoting teachers, and for keeping the schools in good running order. Legally he is more the head of the township school system than is the county superintendent of schools. In such states the county superintendent of schools is really the head of the county schools only to the extent to which the township trustees delegate authority to him.

3. THE DISTRICT SYSTEM. By the district unit is meant the small rural district, usually containing only one building al-

though it may have more than one teacher. It was the natural unit in the beginning of our school system and has tended to persist in a number of states. As a unit of school organization it is generally condemned by American educational authorities. Usually it is too small to be self-supporting and brings about great educational inequalities within a state. In addition to this it is too frequently controlled locally by an inferior type of leadership, and brings into existence so many school boards that the school machinery becomes cumbersome. It is expensive, inefficient, and generally accompanied by a shortsighted policy.

4. THE CITY SCHOOL DISTRICT. The city school district is a part of the educational organization just as much as any other school district. Of all forms of school districts, however, the city has made the greatest advancement, and today it has grown to such proportions that it faces many difficult educational problems. For sound educational policies the city district is far superior to all others. It usually has the most money, the best qualified teachers, the best buildings, and the best leadership. It has a board either elected by the people or appointed by the people's representatives. This board appoints a superintendent of schools as its chief executive. The board can and usually does pay a sufficiently attractive salary to get a well-qualified leader, and then clothes him with considerable responsibility in the carrying out of its policies. The better type of leadership and more progressive policies of the cities have led the state to be quite liberal in delegating power to them. Recently, however, there has been a growing tendency for the state to require greater uniformity in its standards so that as a result the city schools do not possess the freedom they should have. Should they make their own courses of study? Should they offer any curriculum they wish without regard to the state plans? Should they use whatever textbooks they choose regardless of state adoptions? Such questions are being fought out in a number of states at the present time. When definitely answered both the state plan and the city plan will doubtlessly

be greatly benefited. It should never be the policy to insist on such rigid uniformity as will hamper the best educational progress, but the state should insist on such uniformity as will insure the best progress to the whole state rather than to any specific unit of it.

What type of school unit is the most efficient for the state in carrying out its plan? Probably no one in the United States has a complete knowledge of the facts that will permit him to give a definite answer to this question at present. There is almost a universal belief among authorities on education that the one-building district or even the township district is too small, but there is by no means uniformity of opinion on the efficiency of the county and the city as districts. Some would hold that the large city has so many diversified problems that it should be separate and distinct from the county unit. Others believe that the county unit should be all-inclusive, comprising the cities as well as the counties proper. What the final solution will be no one knows, but it is certain that the tendency is distinctly in the direction of stronger centralization than is generally found at the present time. This tendency is shown in the state's attempt to make itself felt more strongly in financing the school units, in the uniform adoption of textbooks, and in setting the qualifications for teachers and the general minimum standard for school levels. It is also manifest in the consolidation of the smaller local units. Small rural schools are consolidating into larger districts and small independent city units are uniting with other units to form a larger school unit. It will be seen, then, that the state school plan provides for a state board, a chief state school officer, and his helpers. Then the state is divided into smaller units, each having a plan similar to that of the state itself. There is considerable doubt, however, in the minds of educators and school authorities as to the type, kind, and size of local unit that is most efficient in the development of the state's plan.

The Internal Organization of the Local Plan. In order that the state plan may function most efficiently, the local units

are permitted considerable leeway in the type of functional organization they have. Usually, however, the state has more or less to do with local plans so that there is much uniformity among different districts. In almost all cases the school plans are thought of in terms of different school levels. Usually the plan is built on three distinct levels—the elementary school level, the secondary or high school level, and the higher education level.

The elementary school level. The elementary school level may consist of either the first six, seven, or eight years of the child's school life. Formerly it took up the first eight years nearly everywhere, although there are a few states in which pupils have always spent only seven years on this level. More recently, however, there has been a tendency to utilize only the first six years of the child's school life on the elementary level. There are several reasons for the shortening of this period. In the first place, the purposes of the elementary school in the United States have always been twofold: (1) The developing of command of the fundamental processes. (2) The developing of integrating ideals. More and more it is being realized that the normal child does not require an eight-year period to get possession of the fundamental processes. States whose schools have never required more than seven years on the elementary level have from all appearances turned out children who could do just as good work on the higher levels as those schools whose children had spent eight years. Moreover, there has been an increasing recognition on the part of teachers that the seventh and eighth grades were more or less a review of the work offered in the first six grades. This not only caused a waste of time but was monotonous and uninteresting to the children in the seventh and eighth grades. Our physiological knowledge of the child has developed to such an extent that it argues for a change in the type of work at a period beginning about the seventh grade. All of these arguments have created a rather general demand for a six-year elementary school. There is, of course, in the elementary school considerable uniformity throughout a state. In many states

the same kinds of textbooks are used throughout all the local educational units of the state, whether rural or urban. This is as it should be, for the same fundamental processes are needed by the rural child as are needed by the city child. This applies to spelling, poems, and facts in civics, as well as to the addition, subtraction, multiplication, and division processes which are to be mastered.

When one considers the integrating ideals in a democracy, it is even more important that the offerings in the different units be similar. In every case the offerings must be such as to develop respect for our fellow men, sympathy for other people, a coöperative spirit, and a social attitude. Consequently, one may consider that this tendency toward greater uniformity should continue on the elementary level.

The secondary level. When the elementary level continued for eight years, the secondary level almost always continued for four years. It usually comprised the chronological ages from fourteen to eighteen for the normal child. Naturally, however, the tendency to shorten the period for the elementary school level tended to lengthen the period for secondary school education. Today there is an increasing tendency to consider the secondary period as six years in length, including the chronological ages from twelve to eighteen. A study of this period in a child's life indicates rather sweeping physiological changes about the time the average child would be beginning the tenth grade. The eliminations from school have always been heavy at the close of the ninth grade. These, with other reasons, gave rise to a break in school levels at the close of the ninth grade. The result was two secondary school levels—one usually comprising the seventh, eighth, and ninth grades, and designated the junior high school level, the other comprising the tenth, eleventh, and twelfth grades, and designated the senior high school level. Still more recently there has come into existence the junior college, comprising the thirteenth and fourteenth grades. As yet it is not known whether this will become a part of the high school level or a part of the college level.

The purposes of the junior high school level have been stated by many different writers. It will not be far amiss, though, to summarize them under the following three headings:

1. TO PRESENT AN OPPORTUNITY FOR EXPLORATION. At about the age when the average child reaches the junior high school level he has no definite knowledge of what his desires, aspirations, and interests are; therefore, the purpose of the junior high school is to give him a chance to explore and to try many different subjects and activities, with an idea of discovering where his greatest interests are. It is hoped that by this means his interests and desires will be discovered so that he can launch out on definite life purposes.

2. TO OFFER PRE-VOCATIONAL WORK. There is little authority today for advocacy of vocational work in the junior high school. However, it is quite evident that many children must leave school early and that a number of them will drop out at the close of the junior high school period. Some pre-vocational work which will start them on their major lines of interests in a vocation is therefore highly desirable and is advocated by the best authorities on the junior high school. If the junior high school is to meet individual differences, it seems essential that it endorse the pre-vocational conception.

3. TO CONTINUE COMMON INTEGRATING EDUCATION Integrating ideals develop slowly. While the elementary school is specifically charged with this responsibility, it cannot hope to complete the job in six years. For this reason the junior high school must continue this function. It is expected to do this by its greater stress on socialized training and the presentation of occupational analyses.

The purposes of the senior high school are also threefold. In the first place, the senior high school must continue the integrating ideals. The senior high school is doing this better today than formerly because of the stress that is being put on the social studies. It is believed that the social studies are peculiarly fitted for this purpose. At present the tendency is to consider the social studies in the senior high school the core of the

curriculum. Stress on the integrating ideals in the senior high school should be the result.

A second function of the senior high school is to provide vocational training for its pupils. This does not mean that the pupils in the senior high school are to be turned out fully equipped for work in the vocations in which they have been trained, but it does mean that those pupils who cannot continue their education at the completion of the high school period should have had some preparation for the work they are going to do. Those who are to enter college should be just as well prepared for their work as those who may enter wage earning occupations. The claim is often made that the senior high school is becoming less and less a preparation for college, but studies of almost every type indicate that the group expecting to go to college from the high school shows a larger percentage of the total than any other group.

In the third place, the senior high school must utilize the principle of differentiation in its curricular offerings. This is another way of saying that the senior high school must meet individual differences. While curricula are varied in the junior high school and departmentalized teaching and subject-promotion are always utilized, it is in the senior high school that varied curricula leading to different goals are begun. Consequently, it is not unusual in the senior high school to find a number of different curricula offered, with pupils enrolled in each according to their interests and aspirations.

Collegiate level. This level consists of grades 13-19 inclusive. The first four years, or grades 13-16 inclusive, on this level are spoken of as the undergraduate work and are usually required for the degree of Bachelor of Arts or Bachelor of Science. The fifth year on the collegiate level, or grade 17, together with some evidence of research, is usually required of the student for the degree of Master of Arts or Master of Science. The sixth and seventh years, or the eighteenth and nineteenth grades, are usually required as residence for the degree of Doctor of Philosophy. In addition to this, the Doctor's degree

must usually be accompanied by a research study that demonstrates the ability of the student in the field of his original investigations. The chief purpose of the collegiate level is a liberal education together with that degree of specialization required for the work one is to do. It is not only vocational but cultural and civic as well.

It will be seen, therefore, that the plan of education in the United States is the ladder type. In actual practice there are seven levels or rungs in this ladder as now organized, each made up of a certain number of grades. The grade representation of the different levels is often indicated in this way: 6-3-3-4-1-2, with the 6 representing the number of grades on the elementary level, and the first 3 the number of grades on the junior high level. Frequently in the smaller schools the organization takes the plan of 6-6 or, in other words, the junior high school and senior high school are organized as one unit. It should be said here that at present there is a tendency to shift the division line of some of the levels. Just now much is being written about the junior college. With the definite establishment of this institution the division may look like this: 6-3-3-2-3-2, or 6-4-4-2-1-2. However, no one knows where the division line between the elementary school and the senior high school will finally stop. That the junior high school will continue to interpose a level between the elementary school and the senior high school one may feel fairly sure, but the final position of the junior college level is much in doubt at the present time.

Classroom Organization. Having discussed the state plan of organization and the local internal plan of organization, we may now turn to a discussion of the organization within the classroom. As has been said, the different educational levels are divided into grades. In the local unit a certain number of pupils in one or more grades are turned over to a teacher for instructional purposes. The success of any school organization, then, depends to a very large extent on the teacher. For this reason much has been written concerning the teacher's work, her qualifications, opportunities, tenure, teaching load, and salary.

In fact, the success of the local unit plan depends to a very great extent on the ability of the superintendent and board to secure well-qualified teachers. The teacher's relations to the superintendent must be cordial, and in turn the superintendent must trust the teacher with responsibility and give her opportunity for initiative in working out and carrying into execution the plan for her own room. If this is to be done, the teacher must be happy in her work. To be happy she must feel that her work is a success. Her success, however, will depend very largely upon the plan of the schoolroom organization. The following are some of the factors that must be noted in the teacher's schoolroom plan:

The school schedule. The teacher must first of all plan her daily work. She must have a definite time for different recitations, definite periods for the pupils to study, and definite allotments for the recreation or rest periods. Such a plan is usually called the program, but more recently it is being referred to as the schedule. Often when a teacher has her schedule completed she finds that she has so many recitations for each day that the recitation time is entirely too short for effective work. In this event she can usually reduce the number of recitations by the combination of classes or by the alternation of different classes and subjects. Usually, too, a number of subjects can be correlated into a general lesson, such as language, reading, and writing in the lower grades.

Another method of reducing the number of recitations per day is by the use of the rotary schedule. By this method the teacher allows herself as much time as she desires for each recitation, and if she does not get through all the recitations in one day she begins the following day where she left off the day before. This assures the same number of recitations for each subject, although each subject will not be taught every day. In the past much advice was given as to the time of day for offering certain subjects; for example, teachers were advised to teach arithmetic at the beginning of the day, and never to teach drawing and writing just after the intermission. It is very probable

that such advice is based on opinion rather than facts. In fact, certain experimental investigations appear to indicate that it makes little difference when arithmetic or some of the so-called harder subjects are scheduled.

The control and stimulation of attendance. Irregularity of attendance is a source of waste and should be avoided as far as possible. Regular attendance should be habitual, consequently the teacher should have definite plans for the control and stimulation of attendance. In this connection she should have a definite plan for working with school officials in enforcing the compulsory school law. It would be desirable to make the school work so interesting that each child would want to attend, but as long as this is not done, the teacher is not only justified in enforcing the compulsory school law wherever necessary, but it is her duty to do so.

Rewards, prizes, and competitions to stimulate attendance are also justifiable at times, but they should always be used as crutches to bridge over the gap to the place where school work itself will eventually challenge sufficient interests to keep the child in school.

All such artificial means of stimulation are not to be compared with a social spirit of coöperation that makes each pupil feel himself a link in the great work to be done by the school. Perhaps it would be well to point out here that incentives to attend school may be too strong. There are days when the health of the pupil is such that he should not attend school, and any incentive that will draw a child to school when attendance may impair his health or the health of others is to be condemned.

The plan of classification and promotion of pupils. The teacher must have a definite plan of classifying and promoting pupils. As shown elsewhere ¹ in this text, the individual differences among pupils in the same class are very great. To meet some of these differences a number of schools have a plan of grouping, although it is sometimes attacked as being undemocratic.

¹ See Chapter VII on Individual Differences.

Other schools are using the individual instruction plan, so that each child moves at his own rate. It is probable that this method will be much more widely used in the future than it is at the present time.

In still other schools the plan is to hire a special coach for the retarded group. In others the retarded children are removed to a special room called the opportunity room. Again, others are meeting the individual differences by enriching the curriculum for the bright pupils, and keeping the time spent in school a constant for both the bright and the dull pupils.

Many other plans are used by different schools in classifying and promoting pupils, but the plans mentioned here are sufficient to show the importance of a definite plan for this purpose.

A plan of mechanizing routine. In the fourth place the teacher should have definite plans for mechanizing routine factors. There is no reason why most of the routine activities done by pupils every day should not be habitual. A number of activities come under this heading. The following are illustrative: putting books in desks, hanging wraps on hooks, the passing of lines, distribution of materials, and practicing for fire drills. A definite plan for collecting and distributing materials such as are used in drawing, for example, is almost indispensable in an efficient and well-regulated schoolroom. The habit of writing neatly on the blackboard and of insisting on neat papers from the pupils should be cultivated. Such habits will be reflected in the teacher's reports to the superintendent and consequently will be reflected later in the teacher's success grade.

While the teacher will have many other plans in the well-regulated schoolroom, those mentioned—the plan of the schedule, plans for attendance, for promotion and classification, and plans for mechanizing routine factors—are sufficient to emphasize the fact that in any discussion on school organization the teacher's plans within the schoolroom cannot be overlooked.

QUESTIONS AND EXERCISES

1. What are the arguments for and against the parallel type of schools? Are there any dangers in the ladder type of schools where education is free?
2. In your opinion, why are the American people so anxious to preserve education as a distinct function of the state? Are they as jealous of their state rights in other respects?
3. What are the arguments for and against a Secretary of Education in the President's Cabinet?
4. Trace the movement toward greater centralization in education in your state.
5. Why have we come to believe that six years is sufficient time for elementary education?
6. Show diagrammatically the plan of school organization in a city of 60,000 people.
7. What are the legal powers and duties of the state superintendent of public instruction in your state? What are the legal powers and duties of the state board of education?
8. What are the arguments against the one-room school as an independent unit? Are the arguments the same against the township?
9. What are the arguments in favor of the junior college? Trace the history of this movement in the United States.
10. Make an age grade table for some school you know.
11. Assume that you are to teach a sixth grade class of two sections. Make out your proposed schedule based on your state course of study.

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XII

PROBLEMS IN LOCAL EDUCATIONAL ADMINISTRATION

In the chapter on school organization the school plan was discussed both from the state and local standpoints. It was also stated that the problems of school administration should be thought of in connection with the problems encountered in putting the school plan into effect. These administrative problems are both state and local, but in this chapter we shall confine our discussion to local administrative problems only. Local problems in educational administration are of two kinds, external and internal.

Problems of External Administration. Problems of external administration may be thought of as those problems of the school for which the public and the school board are directly responsible. While education is a state function and should be thought of from the standpoint of a state school system, the fact still remains that the local school system is in practice largely managed by the local community. The state often aids in laying down the broad outlines to be followed and sometimes helps in a financial way, but active state oversight in most states is not sufficient to guarantee good schools. Much of the initiative for school betterment must come through the local community. The local community, either directly or through its representatives, is responsible for hiring the teachers, for keeping its building and equipment in good shape, for its libraries, for its extra-curricular activities, for its districting, and sometimes for its textbooks, length of school term, supervision, curriculum offered, a large share of its finance, and other important items.

The problem of school spirit in the community. One of the major problems which the local school faces in external administration is that of school spirit. School spirit on the part of the community is not a guarantee of good schools. One of the basic factors in a good school is financial support. No community can have good schools unless in some way it can get money to support its educational program. It must be admitted that there are communities that are not able of their own volition to get the financial assistance necessary. The economic wealth necessary for good schools may not exist in the community. On the other hand, one may say that without a community spirit it is well-nigh impossible to have efficient schools. The community spirit is a vital part of an effective school system. Too frequently one finds practically no school spirit in a community. The people in some communities, instead of exercising careful oversight of their schools, apparently do not care whether schools exist or not. When one finds such a condition an analysis of causes should be the first step. Why is it that some communities always speak eagerly of "our schools" while other communities apparently feel no responsibility at all for good schools?

One of the chief causes of poor school spirit is the failure of the local community to realize the worth of the school. Often the community is not kept informed concerning the school's progress or condition. In other words, the remedy for poor school spirit on the part of the community is publicity and participation.

There are those who hold that the major aim of the school is to render service. Sometimes this view is interpreted in such a way that one is led to believe that advertising the school is below the dignity of the school. It is sometimes held that if the schools really do worthwhile things, people will make their way to them and give them support without any formal advertising campaigns. This is all true enough, but frequently the financial assistance needed in order to do worthwhile things is directly dependent on school spirit. Therefore school spirit

must be built up before many worthwhile things can be done. In connection with the advertising of the schools, Alexander and Theisen have said: ¹

1. It offers the only sure way to insure support to the extent needed.
2. It offers the only sure way to prevent a back fire or reaction after increased support to the extent needed.
3. It offers the only sure way to secure and keep the confidence of the people in the board and superintendent of schools.
4. It provides an opportunity to educate the people in the needs and purposes of the schools and to stimulate public discussion.
5. It enables the school authorities to feel the pulse of the public which they represent and serve.

If, then, advertising the schools is so essential for community interest, every teacher ought to be interested in ways to advertise her school. The following suggestions are made in this connection:

1. **SCHOOL CAMPAIGNS.** Campaigns to arouse better school spirit may be of various kinds. The health campaign is a good device for interesting the community in the school work. A chart presented before community meetings, whereby the health condition of the school children is depicted is an excellent device. Such a chart ought to show the number of children in each grade having certain health defects such as bad teeth, defective hearing, defective sight, undernourished bodies, underweight, overweight, underheight, overheight, and various other things. The chart should also indicate what the school is doing about the situation, and the extent to which the defects are being remedied either by the school or by the parents. A school health campaign should enlist the active participation of all the children in the school as well as all the parents in the community. For example, during "health week" let each child keep a chart of the number of times he brushes his teeth and washes his hands, the number of times he cleans his nails and the number of baths taken; the number of times he combs his hair and the number of hours of sleep taken; the number of glasses of milk drunk and

¹ Alexander, Carter, and Theisen, W. W., *Publicity Campaigns for Better School Support*, World Book Company, 1921.

the number of times he eats spinach. Such a procedure, if faithfully carried on by the children for one week, would doubtless cause a great many parents to take notice and wonder what was going on "over at school." Parents should likewise be urged to take part in "health week." The goal should include a clean-up of the premises at every home and a check-up to determine the conditions in the community that need attention from a sanitary point of view.

2. FINANCIAL CAMPAIGNS. In a financial campaign a large chart showing a great amount of data about the school could very easily be exhibited. Such data should include costs of various units of school work and a comparison made with similar units in other schools, also a comparison of local tax rates with the tax rates in other communities. It should show the immediate urgent needs of the school together with the ultimate needs; the qualifications and salaries of teachers and many other things. To arouse greater interest in the financial campaign let all the pupils and parents take part. Let every child deny himself the pleasure of the movies for one week, and forego the privilege of gum, candy, ice cream, and soft drinks for another week. Ask the parents to observe the sacrificial spirit in the interest of schools for a while. Sugarless days and meatless days observed in a community in the interest of schools would do much to bring home to many people the importance of the school, and who would say that the health of the community might not be bettered thereby?

3. THE PARENT-TEACHER ASSOCIATION. The parent-teacher association is a valuable adjunct to the school as an advertising medium. If such an association is organized it should be composed of *fathers*, *mothers*, and *teachers*. Too often only mothers make up the organization. There is no attempt here to decry the importance of the mothers in the organization, but in the last analysis it is the men who largely handle the purse strings. For this reason as well as others it is important to have the fathers participate. One of the authors, while serving as a county superintendent, at one time had the privilege of organ-

izing fourteen parent-teacher associations in one year. These associations enrolled over 2,200 members, of whom at least 1,000 were men. It was purposely arranged so that some of the most influential business men of the county were selected as officers in the associations. This resulted in organizations that were influential in community affairs. If two acres of land were needed for more playground space and the school board did not have the money to buy it, it was a safe prediction that the parent-teacher association would find a way to procure it. If playground equipment was needed, the parent-teacher association saw that it was provided. Such active associations tend occasionally to meddle in school activities that should be strictly the responsibility of the school board or superintendent, but such tendencies may be easily guided in other directions. Some of the outcomes of the parent-teacher association which one should expect are:

1. A higher standard of home life.
2. Better training in parenthood.
3. Better school and home legislation.
4. Better school facilities such as lunch rooms, pure milk for the children, circulating libraries.
5. A more effective enforcement of the compulsory school law.
6. A more dignified teaching profession, with better salaries and higher training.
7. A better social relation between the parents and the school. The result will mean less friction over such subjects as high school dancing, card parties, school discipline in general, tardiness, and other problems.
4. COMMUNITY SPIRIT. A fourth factor school people should keep in mind in building up the community spirit is the importance of knowing the community and the school.

Every school superintendent and teacher should have in mind certain statistics that help to picture the community in its true light. Such data as the following should be kept in mind:

Wealth per child and per inhabitant.

Percentage of the population which belongs to different races.

Occupations of the parents.

Size of the farms if in the country and the size of business concerns if in the city.

Ratio of the sexes.

Needs of the community.

Kind of home life of the pupils.

In brief, every school official and every teacher ought to have a bird's-eye view of the community in which he works. He must not be satisfied with knowing merely what the community knows about itself. He must know a great deal more so the community will learn to look up to him as a leader or teacher. For example, a young man was superintendent of schools in a certain town. He wanted more knowledge about the business of the town but some things he wanted to know no one was able to tell him. He began making his own investigations. To begin with, he made an accurate check on all the gasoline and motor oil that was sold in the town. He estimated as accurately as he could the amount spent each week for ice cream sodas, candies, tobacco, cosmetics, and theater tickets. After getting all these data, he went before a large community gathering to talk on "The Needs of the School." He did not argue against spending for luxuries, but simply used the amounts expended for luxuries to show that more could be spent for the schools. As a result of his work the whole community became interested in its school finance and gave its support for a better equipped school.

A second type of information that should be kept in mind by school people is the type that pertains to the school directly, such as the percentage of failures in the school, the percentage of the whole school that is over age and under age, the comparative standing of the different grades in achievement, the intelligence scores, the percentage of tardiness during a month; and the amount of absence. All this will be news to the people of the community, and the teachers as well as the super-

intendent should know it so that if the opportunity presents itself they can talk school problems even at social functions if necessary. Facts concerning the school should not be hidden under a bushel. Business men advertise their business and thereby get still more business. General Motors at this writing is spending over \$11,000,000 annually just to advertise the Chevrolet car alone. It is difficult to find a magazine that does not somewhere tell of the fine and efficient make-up of the Chevrolet car. Men who write the "ads" for the Chevrolet car must know the make-up and structure of this car. Its various parts, its endurance, and its comfort, are all common knowledge to the advertisers. Why not apply the same procedure to our schools? Let the teacher and the superintendent *know their school*, let them but believe in it with all their heart and then let them talk it, and school spirit will begin to grow.

5. SCHOOL SPIRIT. Finally and probably most important of all, to arouse a school spirit in the community let the school perform a high grade service.

For the most part there is no better way to advertise the school than to perform high grade service. The physician's success in the community is not measured by the number of social activities in which he engages. His trade and standing in the community do not depend on his being president of the art club, leader of the choir, or a member of a service club. The best way for the physician to arouse community interest in his work is for him to be successful with his patients. Why should it not be the same way with the teacher? The authors do not mean to leave the impression that teachers and superintendents should not participate in social activities, but they do want to warn them against making such things a substitute for high grade work. The kind of school worker that is needed is not a social butterfly and not a recluse. The school needs balanced individuals, who know how to budget their time and balance their duties—individuals who can and will lead in the community when it is necessary but individuals who are thrilled with their job and who realize that there is

no greater or more important work than shaping and molding the lives of boys and girls.

A second problem in external administration of the school is that of the school board. The school board is a go-between for the school and the public. In a sense its problems might be considered as belonging to internal administration, but since it represents the community and speaks for the community we prefer to class problems relating to it as belonging to external administration.

School board members are usually elected by the people or appointed by a representative of the people. Sometimes they are elected at large, that is, they can have their residence anywhere within the school unit and still be eligible for membership on the board. In some communities, however, they are elected by wards, and in that case only one member can be elected from any particular ward. School authorities are quite generally agreed that election at large is the better way. When elected by wards, each ward must furnish one board member whether there is any citizen in the ward who will make a good board member or not. When elected at large all the members can come from the same ward if it is deemed best by the voters or by the appointing power.

School boards generally serve the public free of charge and oftentimes they possess high ideals of service and must make a great sacrifice in both time and effort. There is a wide difference of opinion as to the traits a school board member should possess. A number of studies have been made on the qualifications and traits which they have. Among such studies may be mentioned one made in Ohio.¹ The findings in this study are quite representative of the traits of school board members in Ohio. Their educational standing is presented in Table 9. The table shows the percentage of board members in each type of district who completed the number of years of schooling indicated.

¹ Hoel, Charles, and McCracken, C. C., "Traits and Qualifications of School Board Members in Ohio," *American School Board Journal*, December 1927, page 39.

TABLE 9

THE EDUCATION OF THE SCHOOL BOARD MEMBERS OF THE VARIOUS DISTRICTS IN OHIO

(In Per Cents)

YEARS OF SCHOOLING	CITY BOARD MEMBERS	EXEMPTED VILLAGE BOARD MEM- BERS	COUNTY BOARD MEM- BERS	VILLAGE AND RURAL BOARD MEM- BERS	TOTAL PER CENT
(Elementary)					
5	0.0	0.0	0.5	2.0	0.9
6	0.6	1.3	0.5	2.0	1.2
7	0.0	0.0	0.0	0.6	0.3
8	16.2	22.7	43.0	55.6	40.7
(High school)					
1	2.4	0.0	2.8	2.6	2.5
2	7.2	1.3	4.6	7.2	5.8
3	7.2	10.7	2.3	5.6	2.9
4	20.3	22.7	20.4	12.6	18.1
(College)					
1	1.2	6.7	4.3	0.0	2.5
2	10.8	2.6	5.7	3.6	5.8
3	1.8	1.3	2.3	0.6	1.9
4	23.3	22.7	11.8	6.0	13.0
5	6.0	2.7	0.5	0.0	1.5
6	3.0	2.7	0.8	0.0	1.2
7	0.0	0.0	0.3	1.0	0.5
8	0.0	2.7	0.0	0.6	0.4
Number of board mem- bers studied	167	75	388	301	931

In regard to the education of the board members the authors of the study comment as follows:

The median number of years' training for the city and the exempted village board members lies in the fourth year of the high school; for the county board members in the second year of the high school; for the rural and village board members, in the eighth year of the elementary school; and for the total number of members studied, within the second year of the high school.

The occupations of board members as found in this study indicate that 48.8 per cent are farmers; 19.8 per cent are business men; 5.8 per cent are physicians; 5 per cent are home

makers (women). The remainder are distributed among several different occupations. No one knows just what is the best personnel for a school board. Probably the occupation of the person has very little to do with it provided he possesses certain desirable traits such as an interest in schools and the education of the children of the community; an open-minded attitude; a regularity in attendance at the meetings of the board; tolerance; diplomacy; a business point of view; and a recognition that wise board members do not meddle in the details of school organization.

1. WHAT ARE THE FUNCTIONS OF A SCHOOL BOARD? Probably a good way to answer this question is to mention first a few things that a good school board member should not do.

a. In the first place, he should not assume that because he is a board member he suddenly knows so much about school work that he can act in the capacity of supervisor of instruction. Instruction in classrooms is a delicate procedure. It takes years of toil and study to become efficient at it. How foolish, then, for a man just because he happens to be elected to the board to assume that by some miraculous feat he has come into possession of this delicate power overnight.

b. He should not do those things that would brand him as a bigot. Some board members apparently feel that all the good teachers belong to the same church in which they themselves happen to hold membership. They look upon their colleagues who do not agree with them on every issue as persons lacking in good judgment.

c. He should not play politics. It is the business of the school to render an unbiased service. Its school board members are usually prompted by a high ideal of service. Yet it is a fact that school board members who would not think of taking pay personally for their services will sometimes wheedle around in every way possible to get some personal friend on the teaching staff, and sometimes this happens irrespective of her qualifications. School board members ought to remember that it is the school's function to work with the lives of boys and girls and

that any hindering of this process through political trickery is a serious civic delinquency. Such an act ought to be branded an outrage against childhood.

What are the functions, then, of a school board?

Almost everything a school board should do can be classified under the four functions: *approve, control, select, and delegate.*

The first and probably most important responsibility resting upon the board is that of selecting the superintendent of schools. If this is wisely done the school board will have gone a long way in assuring good schools; if this is unwisely done it is almost impossible to have good schools, no matter what else the board may do. Consequently the board should put much stress on the word *select* or *appoint*.

A second function of the board has to do with a long list of approved (or disapproved) acts relative to recommendations made by the superintendent. For example, it is concerned with the approval of the employment of teachers, principals, and janitors; the approval of tax levies, salary schedules, and attendance rules; approval of the curricular offerings, length of school term, and the budget. In all the activities listed here, it is not the business of the board to initiate or work out the problems in detail. It is the board's business to approve or disapprove of them after they have been recommended by the superintendent.

A third function of the board is that of delegating. Legally the superintendent of schools has little power. It is intended that he shall build up confidence with the board. When a board has a superintendent in which it has confidence, much of the power given to it legally ought to be delegated to the superintendent of schools. For example, all powers relative to supervisory work, assignment of employees, discipline, grading, preparation of curricular offerings, and the preparation of reports and systems of internal accounting should be delegated to the superintendent. In such matters as these the board is not usually capable of acting wisely. Hence it ought to appoint a superintendent of schools who knows these things well and then delegate all authority in such matters to him.

The fourth function of the board has to do with control. The control power of the board should be especially exercised in the selection of a school site and building plans. In this connection the board should seek the advice of the superintendent and work with him, but the power of control should remain with the board.

Problems of Internal Administration.—*The first problem of internal administration has to do with the selection of a superintendent.* As has been said, one of the most important functions of the board of education is the selection of a superintendent. It is expected, that almost all problems of internal administration will be left largely to the superintendent for solution. For this reason great care should be exercised in the selection of a superintendent. No one can say with definiteness what the requirements for a superintendent should be. However, most people will agree that the superintendent should possess the following qualifications:

1. **PERSONALITY TRAITS.**—*a. Vision.* In view of the fact that the superintendent must be able to work out constructive plans for the school he should first of all possess vision. Now to visualize one must possess imagination. There are considerable differences in men in their power to visualize, and the wise board will endeavor to select a man who has this trait well developed.

b. Personality. Personality is a hard thing to define but almost everyone has a pretty fair idea of what is meant by it. It is the power which one has to attract and hold people. In this connection neatness of dress, cleanliness, the correct use of English, and the right personal habits are important. It is not difficult to recall men who know the school business, who are hard workers, and who possess most of the traits essential for a good school executive, but who have personal habits that drive people from them.

c. Good judgment. In the third place, a superintendent should possess good judgment. He must continually be making decisions where judgment must be exercised. Sometimes these

decisions must be made on the basis of snap judgment and at other times the judgment exercised must be slow and deliberate. Neither of the extremes is desirable. A superintendent who snaps out his decisions without much thought will probably go wrong most of the time, while one who is always deliberating and can never make up his mind will never get things done. Somewhere between the two extremes is a balance that one ought to possess.

d. Love of children. In the fourth place, a superintendent should have a sincere love for children. No one will make an excellent superintendent who thinks of children as the manufacturer thinks of his raw product. Children are live, pulsating human beings. They are the adults of tomorrow and every day the school is making its lasting impression on these future citizens. A superintendent who does not realize that the influencing of these lives is the biggest job anyone ever engaged in ought not to be acting in the capacity of superintendent of schools.

e. Social qualities. In the fifth place, a superintendent ought to be a good mixer. A recluse who is not a member of any organization, who takes no interest in the city's welfare, and who is not willing to devote a great deal of his effort to the interests of the town other than the school, will not be sought after as a superintendent. He must possess the happy faculty of meeting people easily, and be able to spread the cheer of optimism.

f. In the sixth place, a superintendent of schools must be a wise money spender. Many superintendents labor under the notion that their work should be judged by the amount of money they can save. This is a mistaken notion. It is not their business to save money but instead to make the most efficient schools possible. Money should be wisely spent, and a most rigid accounting to the public for every cent used should be made, but efficient schools require money, and the wise superintendent will not undertake generally to lower teachers' salaries and be meager with sorely needed supplies. He will usually not be found trying to cut the budget but he will be finding an increasing need for enlarging it.

g. Leadership. In the seventh place, a superintendent should possess the ability to control through coöperation rather than domination. Group organization does not thrive on force and coercion but on freedom and participation. A superintendent who takes the position of "holier than thou" will find his teaching force bristling against him. That he should possess the courage of his convictions and sometimes stand up and fight there can be no doubt, but that he should always control through leadership is desirable.

h. Ability to speak. Finally, the superintendent of schools will find it a great help if he is a good speaker. Often he will be called upon to speak before audiences, and the success with which he does this will at times be the measure which many people will put on his work.

2. ACADEMIC AND PROFESSIONAL QUALIFICATIONS OF THE SUPERINTENDENT. A few years ago a superintendent who possessed an A.B. degree or its equivalent could feel quite sure that he had at least as much training as any of his teachers. This is no longer true. Today it is not uncommon to find schools where a majority if not all of the teachers hold M.A. degrees or the equivalent. For this reason the educational requirements for a superintendent are continually rising. At the present writing anyone who does not possess at least a Master of Arts degree or its equivalent would hardly be considered for an important position as superintendent. The tendency is in the direction of more graduate work than just the amount needed for a master's degree. In the near future there will doubtless be an increasing tendency to select Ph.D. degree men to hold the better positions of superintendent of schools.

The training of a superintendent of schools has not only a quantity requirement but also a quality requirement. It is believed today that the job of superintendent requires a specialized type of training. Many universities have already laid down a special type of curriculum for those desiring to become superintendents. In any specialized type of curriculum one usually finds the following:

a. A tendency to require the applicant to take the regular teacher training curriculum in undergraduate work. This is based on the assumption that teaching experience is a prerequisite for holding a superintendency. The number of years' teaching experience usually stipulated is a minimum of two or three.

b. A special type of training in graduate work, with the professional subjects making up a large part of the curriculum. Since the strangle hold of the old transfer of training doctrine of education has been lessened, there is a tendency to require the superintendent to specialize in his field. It is no longer believed that the man who majors in mathematics will build up a trained mind which will operate efficiently as a superintendent. It is believed that to be an efficient superintendent of schools one should know the problems of the field in which he works. Consequently certain professional courses are usually on the recommended list in the graduate work of the superintendent's curriculum. While there is no unanimity of agreement on such recommended courses, the following are frequently found:

1. Supervision of instruction.
2. School law (applicable for the particular state).
3. Budget making, accounting, and finance.
4. Curriculum making.
5. Philosophy of education.
6. Special problems in school organization and administration.
7. The technique of research.

c. A tendency to require some cadet training. Just as most teachers are required to take practice teaching, so there is a tendency to require the superintendent to have some experience in practicing the superintendency. Doubtless a few months of experience in contact with the work of an efficient superintendent, where one actually participates in the performances of the superintendent, will go a long way in preparing the candidate for such a position. The time is almost certainly coming when this will be looked upon as one of the basic requirements for a superintendent's certificate.

It will be seen, then, that no school board needs to select a superintendent blindly. There are a number of criteria of expected efficiency if the board cares to use them.

A second problem in internal administration has to do with the functions of the superintendent. It is a very easy matter for a difference of opinion to develop between the superintendent and the board in regard to the allocation of functions. School superintendents report difficulties with their boards in almost every conceivable activity. Difficulties over the budget, salaries and bonuses, accounting systems, tax levies, building programs, promises made by board members when not in session, the promotion of teachers, and matters of discipline are frequently mentioned. A great many times such difficulties arise from a failure of the board and the superintendent to have a definite understanding as to the allocation of duties. Many attempts have been made on the part of school authorities to allocate the various duties of the superintendent and the board. On many points there is unanimous agreement, but on others much difference of opinion exists. Roudebush and Russell ¹ suggest in part the following functions as the duties of the superintendent of schools in Indiana:

1. Make recommendations regarding the employment and dismissal of the personnel of the school system. Personnel as used here refers not only to teachers but to janitors, attendance officers and principals as well.
2. Recommendations regarding salaries to be paid to the personnel of the school system.
3. Recommendations regarding major items of school policy.
4. Recommendations regarding the expenditure of school funds.
5. The superintendent should prepare the budget and advise the board in all stages of the preparation. It may also be said that the superintendent should present the budget to the board. The actual voting, though, is a function of the board.
6. The superintendent should work out plans for a building program with the advice of the board.

¹ Roudebush, Roy R., and Russell, John Dale, "The School Board and the Superintendent," *The American School Board Journal*, July 1927, page 47.

7. The supervision of the employees should be directly under the direction of the superintendent.
8. The entire matter of discipline, promotion and grading of pupils is the responsibility of the superintendent.
9. It is the duty of the superintendent to prepare the school programs and arrange for and supervise all special activities, such as athletics, and dramatics.
10. The supervision of the school attendance is the direct responsibility of the superintendent.
11. The actual preparation of reports is the duty of the superintendent.
12. The direction of the office help and the carrying on of the correspondence is the direct responsibility of the superintendent.
13. The superintendent should keep the board and community fully informed as to the condition of the schools.
14. The final responsibility for the proper functioning of the school system rests with the superintendent.
15. It is the duty of the superintendent to provide constructive educational leadership for the community.

The list of qualities given is in conformity with the legal provisions in Indiana but for the most part they are functions that should be carried on by the superintendent anywhere.

A third problem that appears in internal administration is a list of subproblems connected with the teaching profession. Among these problems are the following:

1. THE SELECTION OF TEACHERS. In the past, teachers have been selected largely on the basis of subjective opinion. At present, however, there are many rating scales whereby one can use the objective element in the process of teacher selection. The objective element in selection should aid materially in getting rid of home teachers who are numbered with the dead wood but who are still hangers-on. It ought to make it possible for superintendents to aid each other materially in selecting the proper kind of teacher. A follow-up card for each teacher will be found helpful. When a teacher enters a well-organized school system a card giving experience, qualification, and training, is provided. When she leaves this system and goes to another, the card goes to the superintendent of the new system. If, then, the card is kept up to date, the superintendent can

always get an inventory of his teachers by simply turning to his card file. In connection with teacher selection it should be mentioned that a teacher placement bureau is highly essential. The teachers' agencies can render a great service in this connection if they will hold to a high standard of service. The practice of certain teachers' agencies in recommending a great many applicants for the same position is not conducive to building up confidence in the teachers' agency. A central agency whereby the job and the right teacher are brought together is very much needed, but such a central agency should be dominated by a spirit of service rather than the spirit of dollars.

2. THE TEACHER'S SALARY. The teacher's salary today is all too low in many places. In a study of more than 10,000 teachers in Kentucky in 1926-28, the average salary including both high school and elementary school teachers was only \$784. In some way or other the salary of the teacher must go up. As the requirements for teaching advance and the dignity of the teaching profession rises, there is no doubt but the salaries will increase.

Not only must the salaries be increased in general but a better scheme for distributing the money spent for teachers' salaries is badly needed. Schools can be found where mature, experienced, and successful teachers are teaching side by side with "beginners" for almost the same salary. No better procedure could be found for inducing a great turnover in the teaching profession. When a superintendent has little money to pay for teaching there is all the more need that he have a carefully devised salary schedule. Teachers are happier when working under a salary schedule than they are when there is a general scramble to see who can get the most. No attempt will be made here to set up a complete salary schedule, for there will have to be variations to meet the local situation. However, the following principles should be kept in mind in setting up a salary schedule.

a. Any good salary schedule should have at least one item that credits income on investment. There can be no question

that a teacher who has invested \$4,000 in her education should get more on her investment than one who has invested only \$2,000. All good business concerns figure interest on their investment.

b. Entering salaries should be relatively low. One of the greatest incentives to continue in the teaching profession is the chance of promotion. Necessarily, then, when salaries are at a dead level, and where beginners can get almost as much as the most experienced, school systems can expect to have a high percentage of beginners. Railroad companies offer large rewards to hold their employees for they know how expensive a great turnover is. Before the teaching profession can be put on a permanent and stable basis it must also recognize this principle. Moreover, when entering wages are relatively low, there will not be such a strong temptation to use the teaching profession as a stepping stone to something else.

c. Experience, general training, and specific training must be recognized. In recognizing experience, both quantity and quality must be considered. Successful experience must in some way be separated from unsuccessful experience.

d. Superiority in the teaching profession must be recognized and rewarded. A law enacted by Congress for the District of Columbia, effective July 1, 1924, provided for higher salaries for superior teachers. A scheme for determining who are superior teachers was worked out and presented by the superintendent of Washington schools, Doctor Frank W. Ballou.¹ It would not require a large sum of money to reward materially the highly superior and thus provide a real incentive for higher attainment.

e. The salary range must be large. This is another way of saying that provision must be made for future rewards.

f. Finally, the belief is held by some that a good salary schedule must make a distinction between the salaries for men and for women. In other words, "equal pay for equal work" may not be good philosophy when applied to the teaching pro-

¹ Ballou, Frank W., "Determining Who Are Superior Teachers," *Elementary School Journal*, December 1927, pages 256-262.

fession. The arguments for such a view are largely based upon the assumption that there are not enough men in the teaching profession and that since most business concerns pay men more than women, so must the school do likewise if it expects to get the needed number of men. There is no doubt that this view is subject to attack by many authorities.

3. THE TEACHING LOAD. The load of the teacher is not usually carefully figured. The teaching load in many high schools, for example, is five periods a day, regardless of the size of the class or the kind of class. It is much the same in the university, where the teaching load is considered as fifteen hours per week. There are several things wrong with such a method of counting. In the first place, not all classes are the same size and surely it requires more work to teach successfully a class of sixty than a class of ten.

In the second place, the number of different classes necessary to make up the fifteen hours has much to do with the teaching load. It requires more work to teach a two hour course and a three hour course with an enrollment of thirty pupils each than it does to teach a five hour course with thirty pupils enrolled. The number of hours taught per week is the same, but the teaching load when accurately estimated will not be found to be the same.

In the third place, the subject one is teaching has much to do with the teaching load. Most people will concede that it requires more work and time to teach a freshman composition course than it does to teach an average mathematics course enrolling the same number of pupils.

In the fourth place, when a teacher must teach subjects that are out of the realm of her major and minor, the load is materially affected. That this often happens may be seen from a study made at Ohio State University in December 1927.¹ A tabulation of the returns from sixty beginning teachers in junior and senior high schools of that state shows the following:

¹ Anderson, Earl, "The Teaching Load of the Beginner in High School," *Educational Research Bulletin*, Ohio State University, October 3, 1928, page 280.

TABLE 10

THE NUMBER OF TEACHERS IN OHIO TEACHING SUBJECTS IN 1927 THAT
THEY HAD NOT STUDIED

NUMBER OF SUBJECTS TAUGHT BUT NOT STUDIED IN COLLEGE	NUMBER OF TEACHERS
1	17
2	13
3	11
4	2
5	1

TABLE 11

THE NUMBER OF FIELDS IN WHICH THE BEGINNING HIGH SCHOOL
TEACHERS OF OHIO WORKED IN 1908

NUMBER OF FIELDS	NUMBER OF TEACHERS
1	10
2	17
3	21
4	9
5	2
6	1

Over two-fifths of the teachers taught two or more subjects which were neither their college majors nor minors and five-sixths of them taught in two or more different fields. Such a situation ought not to exist. Some method that will give greater accuracy in estimating the teacher load must be found. These suggestions are given here as pertinent in any method devised:

a. Instead of estimating the teaching load by recitation hours, it would be fairer to estimate it on the basis of pupil hours. A teacher teaching a subject five times a week, and with an enrollment of thirty, will be credited with 150 pupil hours; a teacher who teaches a subject three times a week, with eighteen pupils enrolled will be credited with fifty-four pupil hours of work.

b. Weight the different subjects of the curriculum relative to the amount of work required according to some standard. For example, if it be agreed that a class in freshman composition

should have a weighting of 1, then let the faculty weight all other subjects by this standard. Freshman algebra may receive a weighting of .5, Latin a weighting of .8. Weightings could also be given for subjects according to the number of times per week they were taught.

c. Insist that teacher training institutions of the state prepare the type of teachers that are needed in the state, thereby doing away with the practice of having teachers teaching subjects in which they are not prepared.

4. QUALIFICATIONS OF TEACHERS. In discussing the qualifications of teachers, it should be kept in mind that teaching includes two factors.

The first factor is affection or sympathy, which is concerned with personal relations and emotions. The other is instruction, which has to do with knowledge and intellectual factors. In all probability we have not paid enough attention to the former. In fact, Dr. Frank McMurry ¹ has recently classified the factor of sympathy and affection as the greater of the two when he said: "A warm heart leading to strong friendship is a bigger thing in teaching than skill in instruction. . . . If faith, hope and love are the supreme things in life—the only things that abide, their corresponding rank in education is a fact that should receive far more attention." No one who has seen the influence of dynamic personalities radiate can doubt the fine thought expressed by Dr. McMurry. Undoubtedly some type of machinery in the issuing of elementary certificates should be set up whereby we might better know the worth to good teaching of those traits that go to make up that elusive factor we call personality.

Mark Hopkins sat on one end of a log
And a farm boy sat on the other,
Mark Hopkins came as a pedagogue
And taught as an elder brother.
I don't care what Mark Hopkins taught
If his Latin was small and his Greek was naught,

¹ McMurry, Frank M., "The Biggest Thing in Teaching," *Teachers College Record*, November 1926, pages 215-219.

For the farmer boy he thought, thought he,
 All through lecture time and quiz,
 "The kind of a man I want to be
 Is the kind of man Mark Hopkins is!"

.
 No printed word nor spoken plea
 Can teach young hearts what men should be,
 Not all the books on all the shelves
 But what the teachers are themselves.

What should be the requirements for elementary teachers?

Any attempt to state requirements necessary for the second factor, namely, knowledge and skills, must be more or less general and dogmatic until much experimental work has been done whereby we may know the effect of certain training courses upon teaching efficiency. For example, no one knows today what effect, if any, a three hour course in school management has in producing better teaching results. We do not know to what extent teacher training curricula should be lengthened or shortened.

Dr. Leonard,¹ writing on the dangers of a continual lengthening of professional curricula has shown its effect upon medicine, law, dentistry, theology, pharmacy, engineering, and nursing. As an illustration of the dangers, it is interesting to note Dr. Leonard's findings in relation to medical education. Entrance requirements have increased from one year of high school, or less, in 1900, to two years of college in 1925, a total increase of five years, and for every ten practitioners at present, medical schools are preparing between five and six successors. According to Dr. Leonard, most of the lengthening of preparation is not accompanied by the establishment of different levels of training. He says: "Some workers are needed at the top posts in every field, but to plan a scheme of education which is primarily adapted for the top level does violence to actual conditions and paves the way for the development of inferior and independent schools for the lower levels. As an illustration, witness the current development of the so-called medical schools

¹ Leonard, Robert Josselyn, "Dangers Incident to the Continual Lengthening of Professional Curricula," *School and Society*, Volume 25, pages 759-768.

of newer types, turning out graduates by the hundred in a brief period of time. Such practitioners are to be found in every city competing for practice with those who have completed the super-type of medical education.

"Again it is no wonder that when the Iowa and Wisconsin teacher-training institutions adopted four-year courses, teacher-training departments developed in the high schools as a means of supplying the demand for teachers in the rural schools. Over-extension in terms of length usually results in the establishment of inferior facilities of the short-term type, thus reducing appreciably the gain which was expected."

Dr. Leonard has very effectively pointed out some of the dangers in our lengthening the curricula for teachers, and this should especially be kept in mind in suggesting requirements for elementary teachers.

The following suggestions, stated rather dogmatically, have been offered recently by one of the authors¹ as needed next steps in training elementary teachers in Kentucky in so far as the factor of knowledge and skills is concerned. While the suggestions given here were made for the state of Kentucky and related only to the training of elementary teachers, yet they might well serve as principles for the consideration of teacher training work in any state.

a. That the maximum training necessary to receive the highest form of elementary certificate be set at seventy-two weeks' training above high school graduation. In some states the maximum training may be set as high as four full years of work above the high school level.

b. That different levels for reaching the maximum goal be established with the minimum level definitely set as a certain amount of training above the high school level.

c. That the curricula leading to all levels be of the specialized type, and properly differentiated from other curricula. It is suggested that the three types of curricula leading to all levels be the primary, intermediate-grammar and rural.

¹ Adams, Jesse E., "Requirements for Elementary Teachers," *Kentucky School Journal*, Volume 6, Number 3, pages 42-43.

d. Make it impossible for anyone to teach in any of the above named fields unless he be a holder of the appropriate certificate.

e. A more strongly centralized state department of education that will require considerable uniformity in the curricula offered in the various teacher training institutions in the state.

f. That all certificates be granted on credits earned in state-recognized institutions, such credits to be certified to the state department of education.

g. All renewals of certificates lower in value than the highest form be based on additional credits earned.

h. That all certificates be issued by the state department of education.

i. That teachers now in service be properly taken care of. This would doubtless necessitate:

1. That all certificates held now be not jeopardized in the new arrangement.
2. That those teachers in service who must do additional work to meet the new requirements be given a reasonable time to do so.
3. That proper credit be allowed for experience in deciding the amount of work to be done by any teacher now in service.

It is the opinion of the writers that any state might well afford to utilize the above principles in a future program for the training of teachers, keeping in mind always that they are to be modified in accordance with the greater wisdom that will be gained through experience and experimentation.

The problem of attendance. In most school systems there is so much waste because of poor attendance that the problem of attendance should receive far greater attention than is given it in most schools. The superintendent should be held directly responsible for this problem in his school. Many incentives can be utilized for increasing attendance. In the first place, a school based on modern progressive methods, whereby children will be made to want to come to school, is the best incentive one can have. Poor teachers, an old traditional curriculum, and poor school and community spirit are breeders of bad attendance. Fortunately, all of these factors are subject to control by the school.

In the second place, a proper enforcement of the compulsory school law rests directly upon the local school law. In many states the law is carefully drawn and rigidly enforced. In others it is carelessly drawn and very loosely enforced. In many states the state school fund is based upon the school census rather than actual attendance. This puts a premium on non-enforcement. Other states do not require attendance in school every day of the term, but only a certain number of days. In still other states there are very inefficient methods of keeping the school census so that it becomes a difficult matter to know who is supposed to be in attendance. All of the provisions mentioned here are weaknesses in a good compulsory school law. But while the compulsory school law in many states is carelessly drawn and fails to bring about the results sought, it is probable that a still greater weakness is in the enforcement of the law. Before a compulsory school law can be enforced there must be a qualified attendance officer and a coöperative teaching body. Certain requirements should be set up for attendance officers in every state. Their requirements should be such as to make sure that attendance officers will be appointed who appreciate the value of education, who are willing to make a sacrifice for the sake of childhood, and who are tactful and know how to secure the coöperation of parents and teachers. In other words, the work of the attendance officer is far greater than merely finding out who is out of school and then dragging him up before the courts. This ought to be the least part of his work. If an effective attendance officer is to be procured the financial rewards for this service must be sufficient to attract the caliber of men needed.

The problem of the curriculum. The whole question of the curriculum, its preparation, revision, grade placement of materials, and methods of presentation, present many problems that must be met through internal administration. The curriculum has been discussed elsewhere in this text, and for that reason will not be discussed further in this chapter.

The problem of extra-curricular activities. Any extended discussion of the problems connected with extra-curricular activities cannot be given here. The following, however, are some of the problems that appear in connection with the internal administration:

1. What principles shall guide in the organization and administration of extra-curricular activities?
2. Who shall supervise such activities?
3. To what extent shall pupils be permitted to participate in extra-curricular activities?
4. How many types of extra-curricular activities should be undertaken within any particular school system?
5. How shall extra-curricular activities be related to curricular activities?
6. How shall extra-curricular activities be financed?
7. Should credit be given for extra-curricular activities?

It will be seen from the above that careful attention and study should be given to the whole study of extra-curricular activities. For the past few years this problem has been increasing in its importance and magnitude.

QUESTIONS AND EXERCISES

1. Prepare a set of rules and regulations that you think should guide the board of education in its relation to the public schools in a city of 20,000 population.
2. Suppose you are teaching in a community where school spirit is almost totally lacking, what are some things you would do to get the community interested?
3. Make a brief report to the class on the history and present status of the parent-teacher association in America.
4. List twenty types of information that you believe school people should place before the public.
5. Should an individual who wishes to become a superintendent of schools be required to take the curriculum for teachers and to have some experience in teaching before he is permitted to take the curriculum for superintendents? Why?
6. Think of the superintendents you have known who have been very successful. What were the qualities which they possessed which you believe accounted largely for their success?

7. Mention several ways by which we might estimate the teacher's load. What plan for estimating the load would you recommend?
8. In many places one will find teachers who prepared themselves to teach in high school, teaching in the elementary grades, although they have had no special training for elementary grade work. How could this be avoided?
9. What ought to be done about the constantly increasing over-supply of teachers?
10. Are there any real dangers in lengthening the teacher training curriculum? What are they?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XIII

THE SCHOOL PLANT AND ITS EQUIPMENT

In 1824 a certain state in the Union decided to set up a standard for school buildings. Prior to that time any kind of building could be used that proved satisfactory to the local community. In this particular year, however, a definite standard was given the local community, whereby the school building plans in the future were to be gauged. According to a contract drawn up under this law, the school building was to be made of logs of a specified number of inches in diameter; there were to be two windows, one on either side, made of greased paper; there was to be a latch-string on the door; the fireplace was to be so many feet wide and so many feet deep; and the roof was to be made of boards rived from white oak, not less than four inches in width.

Still further insight into the school buildings of those early days may be given by a quotation, taken from Barnard in his *School Architecture*, published in 1848. Commenting on the school buildings, he said:

They are almost universally bad, repulsive in their external and internal appearance and built at the least possible expense of material and labor. . . . They are furnished with seats and desks not properly made, not adjusted to each other and not arranged in such a manner as to promote the comfort and convenience of the scholars.¹

This was about the beginning of standardization in school building construction in the Middle West, and the standard was as high relatively as for other types of buildings. Such requirements make interesting reading to those of us who are accustomed to the well-planned and splendidly constructed

¹ Requoted from *American School Board Journal*, July 1927, page 40.

school buildings so frequently found today. Probably no greater advancement has been made in any phase of educational progress in the last twenty-five years in the United States than in the advancement in the type of school building in the nation. This is as it should be, for those who have the responsibility of planning and erecting the school buildings of the nation have a great responsibility for child welfare. The reasons for this may be easily understood.

Why School Architecture Is Important. In the first place, modern school architecture has become a science. To be successful in school building and designing today one must have studied the subject diligently. School buildings are no longer looked upon merely as protective structures for children. They are regarded as a means to an end, and unless they fit into the educational program they invariably fall far short of their mark. No longer do progressive communities erect a school building and then try to make the educational program and educational plans conform to the structure built. Weeks, months, and sometimes years of planning for the best type of educational program for a community precede the construction of the building.

A second reason for emphasizing the importance of school building and designing is that school architecture has its effect upon the character of the pupils. A building of an architectural design that is beautiful, attractive, pleasing, and inspiring, tends to have its effects upon the lives of those who come in contact with it. No one doubts any longer that one's character is affected by the amount of life insurance he carries, by the kind of clothes he wears, and by the size of the state he lives in. In the same way it is believed that the kind of house in which one lives and the type of school building he attends also affect his reactions on life. A school building that presents an unattractive appearance, with the grounds poorly kept, and in which the seats and walls are defaced, does not lend itself to the development of respect for educational ideals.

In the third place, the type of school buildings children attend may affect their health either directly or indirectly. The ventilation, temperature, and relative humidity may all be directly affected by the type of school building and all of these affect health. Absences in a school increase perceptibly as the temperature of the rooms fluctuates in either direction from 68 to 70 degrees.

In the fourth place, it is generally felt that the type and design of a school building may do much to make or mar one's ideals of citizenship. Since government in a democracy is dependent upon the education of its citizens it is necessary that every effort be made to build high ideals and fine standards for individual and community life. This can be more effectively done when pupils attend beautifully designed school buildings of modern construction that are well equipped and well kept.

Difficulties in Procuring Desirable Buildings. Although it may be easy to recognize the importance of proper school building and designing, it is a more difficult matter to procure desirable types of buildings. Some of the difficulties are as follows:

Financial difficulty. In the first place the financial difficulty is almost always present. Many communities are unable to erect the type of building needed, and until the state takes a more active part in helping finance building programs, one can always expect that many school buildings of an undesirable type will continue to be constructed. Then again, some communities that are able to erect school plants that have pleasing architecture fail to do so because they do not realize the worth of attractive school surroundings. There is too much of the old doctrine that "What was good enough for father ought to be good enough for the children."

Insufficient knowledge on the part of school boards. A second difficulty in the way of realizing new school buildings of the proper type is a lack of knowledge on the part of the school board. It is to be regretted that occasionally a school board takes it upon itself to erect a new school building, ignoring the

superintendent of schools almost altogether. Such a procedure is sure to result in a school building that is out of harmony with the educational plan. It would be an unusual board that fully understood the program of education planned for the community. No school board should attempt to pass on plans for the erection of a new school building without the most careful advice from its superintendent.

Insufficient knowledge on the part of superintendent. In the third place, school buildings are often improperly constructed, because of the ignorance of the superintendent of schools. It is not uncommon to find superintendents who are well versed in the educational work as such but who know very little about modern school building construction. A superintendent who is contemplating a new school building should first of all set up his educational program, including the objectives to be reached and subjects to be taught. He should know the probable enrollments for each class; he should be able to predict with considerable accuracy the growth in school population over a period of years, and as nearly as possible the future social demands on the school building. A lack of such knowledge is costly. For example, a new building was erected in community X in 1929 at a cost of \$80,000. It was not large enough to meet the demands of the community within one year after its completion. Since the building was of such a type that no additions could be made to it, there was nothing to do but undertake the construction of another building more in accordance with the demands of the community. This resulted in waste of money and in a building program that was unsatisfactory.

Superintendents often fail to appreciate the importance of knowledge of school architecture. They feel that the school architect and contractor can be held responsible for results in this type of work. This is not a safe policy. Scarcely ever can one find an architect who has the information necessary for building to meet future educational needs unless he has excellent advice from someone closely connected with the educational plans. Almost always the only one connected with the schools

who has a vision of the future educational program is the superintendent. He above all others should take a deciding hand in the school building program.

In order to present very briefly to the reader some of the important problems connected with the school plant, the remainder of this chapter will be devoted to the following four headings:

The School Building.

The School Building Equipment.

The School Ground.

The School Janitor and His Work.

The School Building. A number of tendencies seem quite distinct in modern school building construction. Among these are:

First, the tendency to consolidate into larger buildings. There is an increasing tendency to consolidate schools into larger and larger units. A century ago practically all schools were in one-room structures except in the larger cities. With the coming of good roads, consolidation has become the watchword in many states. More and more the little one-room school is disappearing and schools employing from four to fifteen teachers are taking their places. This tendency may be illustrated by certain data taken from Indiana which is a pioneer state in the movement for consolidation. According to an article in the *American School Board Journal* of September 1927, there are 6,218 fewer one-teacher schools in Indiana at present than there were in 1890.¹ As compared with that date, 69.5 per cent of the one-teacher schools have been abandoned and consolidated. There were at the time this article was written 1,402 consolidated schools in the state. Of this number 718 were schools employing four or more teachers each. There were 182,917 pupils enrolled in the consolidated schools and there were four counties in the state that reported 100 per cent consolidation. This tendency to consolidate should terminate in a material improvement in the type and design of school buildings, particularly as it is found in the rural field.

¹ Roudebush, Roy R., "School Consolidation in Indiana," *American School Board Journal*, September 1927, page 47.

Second, there is a tendency for the state to give more aid to the local community in its building program. In cities where wealth is concentrated, it is not difficult to erect modern school buildings, but in the rural field in many instances the outlay of wealth necessary in order to erect modern buildings is beyond the capacity of the community to pay. For this reason the state is taking an increasing interest in this field. This may be seen in some of the legal provisions in the different states:

1. Alabama: The state appropriation in Alabama is \$134,000 annually; \$2,000 to each county for erection, repair, and equipment of rural schoolhouses.

2. Minnesota: For buildings in consolidated districts, forty per cent of the cost, but not to exceed \$6,000 to any district for each such building will be furnished by the state.

3. Missouri: The state will pay one-fourth of the cost of a consolidated building up to \$2,000, provided it has a site of five acres and a satisfactory school building.

4. South Carolina: The state will match each \$100 raised locally for building purposes with \$50 state aid.

5. Wisconsin: State appropriation of not over \$10,000 annually to help in the erection and equipment of consolidated buildings; one-half the cost, but not to exceed \$1,000, \$1,500, \$2,000, and \$3,000 for schools of one, two, three, and four departments, respectively, in consolidated districts formed by uniting schools of three or more districts; and not to exceed \$5,000 for a graded and high school in a consolidated district uniting all districts of a township.¹

Tendencies to standardize school building construction. It has not been long since each local community had to work out its own salvation in school building and designing. Travel was difficult and educational administration was hardly known. Now, however, the construction and designing of school buildings have been so carefully standardized that there is hardly

¹ Baldwin, Robert D., "States School Building Aid Programs," *American School Board Journal*, August 1927, page 45.

any justifiable excuse for the construction of an inefficient school building with large amounts of waste space. The wise superintendent will acquaint himself with these standards and then work out his own program. For example, when the Denver School Board recently decided to put \$2,000,000 in buildings for its elementary schools, it voted, upon the recommendation of its then present superintendent, Jesse H. Newlon, to adopt the following policies and standards for its elementary schools:

1. All elementary school buildings shall be of the open type to insure the best possible light and ventilation in the classrooms.

2. All new elementary school buildings shall be above or at grade.

3. Additions shall be made to conform in architecture with the buildings already erected.

4. The size of the standard classroom shall be 22 feet in width and 30 feet in length.

5. The kindergarten shall occupy space equal to about two classrooms.

6. The size of special rooms, such as manual training, home economics, science, and so forth, shall vary according to the needs of the school.

7. As a rule, the elementary auditorium shall be built for instructional purposes and as such shall be built for about 300. However, in certain communities the community use of the auditorium will require a somewhat larger capacity.

8. In the larger elementary schools, the standard gymnasium shall be 40 feet in width, 60 feet in length, and 16 feet in height below the trusses. In smaller schools where playroom and auditorium may be combined, the size shall be 22 feet in width and not over 60 feet in length, leaving a space which can be changed to make two classrooms as needed.

9. In the larger schools where 40 feet by 60 feet gymnasiums are built, there shall be provided two small locker and shower rooms, one for boys and one for girls. These shall be large enough to accommodate forty 12 inch by 12 inch by 30 inch lockers. About five showers should be provided in each.

10. Quarters for physical training teachers shall be provided in connection with the gymnasium.

11. Each of the large elementary schools shall be provided with the following facilities:

- a. Small medical clinic.
- b. Library about classroom size.
- c. Built-in corridor lockers sufficient in number to take care of the school.
- d. Teachers' rest room.
- e. Small lunch room and kitchenette.

One of the most widely used score cards or standards for the erection of school buildings is the *Score Card for High School Buildings* by Strayer and Englehardt.¹ This card consists of six large divisions as follows:

Site, building, service systems, classrooms or recitation rooms, special rooms, and general or service rooms. The total points given on the score card for all of these divisions is 1,000. Each of these large divisions is again divided and subdivided into smaller items with each item scoring a certain number of points. Out of the total 1,000 points 145 are assigned to the classroom. The following shows the divisions with the number of points under this heading:

CLASSROOMS OR RECITATION ROOMS

A. Location and connection.....		20
B. Construction and finish.....		65
1. Size	10 points	
2. Number and utilization.....	15 points	
3. Shape.....	10 points	
4. Floors.....	5 points	
5. Walls and ceilings.....	5 points	
6. Doors.....	3 points	
7. Closets and built-in bookcases..	5 points	
8. Blackboards.....	5 points	
9. Bulletin boards.....	2 points	
10. Color scheme.....	5 points	
C. Illumination.....		40
1. Glass area.....	22 points	
2. Windows.....	15 points	
3. Shades.....	3 points	
D. Equipment.....		20
1. Seats and desks.....	10 points	
2. Teacher's desk.....	2 points	
3. Other equipment.....	8 points	

¹ Strayer, George D., and Englehardt, N. L., *Score Card for High School Buildings*, Bureau of Publications, Teachers College, Columbia University, 1924.

A superintendent can apply this score card to his high school building plan and tell pretty accurately the amount of waste space that he will have, the kind of equipment needed, and whether or not he is building in accordance with modern views.

Tendencies to emphasize certain factors as highly important in school building construction.—1. THE LOCATION OF THE SCHOOL BUILDING. As more and more experience in school building construction accumulates, there is an increasing tendency to call attention to certain crucial factors. One of the most important of these is the location. In selecting a school site, one of the most important factors to keep in mind is the convenience of all the children. Too often this is not done. It often happens that a few influential parents in a community are able to locate the site where it is most convenient for them, although it may not be at all convenient for the greatest number. There is probably nothing that will provoke an argument in the community quicker than the attempt to locate a site for the new school building. There are a few principles that should be rigidly followed in selecting school building sites.

No school building should be located near a noisy railroad. When the noise of the trains penetrates the schoolroom it not only results in the loss of much time but it has an injurious effect on the nervous condition of teachers and pupils. Almost always under such conditions the work and morale of the school will suffer. In this connection it should be said that generally it is not a good policy to locate a school building in the congested part of a city. Not only are the noises distracting but also the land is usually so high priced that enough of it cannot be bought to insure a sufficient amount of playground space.

School buildings should not be located on low land where the soil cannot be well drained. It is generally considered a good policy to locate all school buildings on elevated areas. Unless an outlet for a drain can be made one can usually expect damp walls and damp basements.

2. THE CLASSROOMS. Classrooms should be built in accordance with the uses that are to be made of them. No definite

dimension can be laid down as *the* best size. In the past there has been a popular belief that no teacher should have more than thirty or thirty-five pupils and in accordance with this theory it has been claimed that rooms should be approximately 22 feet by 30 feet. Recently, however, it has been shown that one teacher may have many more pupils than the traditional thirty or thirty-five and yet suffer no reduction in efficiency in teaching. If this be true the schoolrooms of the future will doubtless be materially larger than at present. It is not likely, however, that definite dimensions for all classrooms will ever be adopted. A room in which advanced Latin courses are to be taught will probably need to be much smaller than rooms where freshman English courses are to be taught. In fact, the only safe rule for determining the size of a classroom is to keep in mind its probable use. Ventilation, lighting, toilet rooms, and cloak rooms are other factors that should be kept in mind when constructing classrooms.

3. THE CONSTRUCTION OF THE BUILDING. The materials that go into a building will depend upon the money available and the climatic conditions. Some authorities are advocating buildings that are not as highly fire resistant as those which were formerly recommended, but most school administrators will agree that furnace rooms, corridors, and stairways should be made fire resistant. School buildings that are not nearly so expensive as the so-called fireproof type can be so substantially built that they may easily be expected to last fifty years. In a school building that is not fireproofed, double floors are recommended. This not only assures permanency but also is a protection from dust and dampness from the basement. In the construction of any school building the foundation and walls are important. Special attention should be given to this part of the structure. Weak walls and crumbling foundations will, of course, soon destroy the efficiency and usefulness of the whole building.

4. THE LIGHTING. The schoolrooms should be constructed so that they let in the early morning sunshine or the sunshine

in the late afternoon. The tendency is to place the windows as close together as space will permit and to put all windows on the same side at about four feet above the floor. Well-constructed school buildings are expected to have an illumination of from one-fifth to one-fourth of the floor area. In order that the light may be reflected from the ceiling, it is important that the top of the window be as close as possible to the ceiling level.

5. VENTILATION. Fresh air is essential for a healthy condition for study, but there is no unanimity of opinion as to the best way to secure the necessary amount of fresh air. Some of the latest experiments in this field indicate that the fresh air problem is not so important if one can keep the air moving. If properly circulated, 300 cubic feet of air per hour per person is considered sufficient. To keep it moving, however, would doubtless involve some mechanical device which is not possessed by most buildings at present. For this reason it will be well for each teacher to keep in mind that if the schoolroom is not of the self-ventilating type it will be necessary to arrange some kind of artificial ventilation. In such cases windows may be adjusted to provide fresh air and yet prevent drafts.

6. HEATING. Much attention is being given today to the heating of the school plant. Several types of heating systems are satisfactory. Hot-air furnaces, hot-water furnaces, and steam heating are the most common types for large buildings, while jacketed stoves are usually recommended for the smaller buildings, especially for the one-room type.

Tendencies in school building economies. The construction and upkeep of school buildings is a major item of school costs in any community. Many cities are bonded to their constitutional limit and yet cannot provide space for all their children. Consequently there is an increasing tendency everywhere to attack the problem of greater school economies in building construction. Among the economies being practiced today are:

1. Elimination of what may be desirable but not necessarily needed parts in the initial construction of the plant. For ex-

ample, a swimming pool, or separate lunch room may be desirable but they can be dispensed with when the financial outlay is too great for the ability of the community.

2. A reduction in the ratio between non-classroom space and classroom space. A survey of an unselected list of school buildings shows many buildings with actually less classroom space than non-classroom space. Doubtless the future procedure in school building construction will reverse this process and make it possible to convert sixty-five to seventy-five per cent of the space to classroom use.

3. A greater use of the classroom space. Often one finds a classroom which is not in use nearly as many hours per day as it might be. There is considerable tendency at present to make wider use of the school plant than formerly. In some cities, schoolrooms are being used as much as sixty hours per week. Actually, though, most school buildings are not in use more than six hours a day for five days a week, making only thirty hours per week. Many higher institutions of learning are clamoring for more building space when, as a matter of fact, there is plenty of space available if instructors would distribute their class periods throughout the afternoon as well as in the forenoon. In most higher institutions of learning the classroom could be used twice as many hours each day as it is actually being used.

4. School equipment is being purchased and installed more in accordance with the need. At present it is not uncommon to find recitation rooms with many feet of expensive blackboard where not a single pupil will use the board in a whole week. Undoubtedly hundreds of thousands of dollars could be saved in the United States on blackboards alone if careful attention were given to needs in this respect. Certainly most classrooms do not need the expensive blackboards which are usually found running the full length of the wall.

5. Portable buildings, part-time instruction, and platoon plans are other schemes being utilized to relieve the crowded building program in many of our cities.

School Building Equipment. The cost of equipping a school building properly is considerably greater than is usually thought. In thinking of school building equipment it will be well to think of it as of two types: (1) the wall equipment, and (2) the classroom equipment.

The wall equipment. To appreciate the importance of the wall equipment some basis for classification of the equipment is almost essential. Ordinarily such classification is made on the basis of purpose or use of the equipment. One of the best classifications on this basis is that by Clarence D. Kingsley.¹ The classification which Mr. Kingsley makes is as follows:

1. For illumination:

- Windows and window shades.
- Hook for window pole.
- Color scheme and finish of walls, ceilings and floors.
- Artificial light switches.

2. For visual instruction:

- Blackboards.
- Corkboards.
- Maps and display rails.
- Magazine and book display rack.
- Display case.
- Picture hanging space with mantel shelf.
- Electric outlet for lantern.

3. For storage:

- Cupboards and drawers.
- Vertical files.
- Floor cases for charts and posters.
- Bookcase.
- Pupils' individual cupboards.
- Cases for storage of pupils' tote-trays.
- Wardrobes for unfinished garments.
- Teacher's closet.

4. For cleanliness:

- Outlet for vacuum cleaner.
- Lavatory.

¹ Kingsley, Clarence D., "Wall Equipment and Wall Treatment for School-rooms," *American School Board Journal*, January 1927, page 41.

5. For temperature control and ventilation:
 - Thermometer and thermostat.
 - Windows and air deflectors at windows.
 - Vent for air to leave room.
6. For communication:
 - Door.
 - Telephone.
 - Loud speaker or amplifier.
7. For time indication:
 - Clock.

In any schoolroom the question of illumination is very important. From the standpoint of the window the illumination is usually beyond the teacher's control. It is often the same way with the color scheme. However, the teacher can usually make the maximum or minimum use of the window shades. It is not uncommon to find broken window shades that cannot be rolled up and down and which, as a result, are put at a certain position and left there. This should not happen. Almost any teacher can bring enough pressure on the superintendent and school board to have workable shades if she is really interested enough in the subject of ventilation and lighting. Even where the shades are workable, teachers often leave them lowered and then use artificial lights as a means of illumination. Artificial light should not be used when it is possible to have sufficient sunlight.

In regard to equipment for visual instruction, it is well to keep in mind the psychology of attention. Advertisers used to place their advertisements too high above the eye-level, and they were not effective. Now, however, they are being lowered to meet the level of the eye. Blackboards must not be so high that they are difficult to see or so that they may cause eyestrain. A maximum height of seventy-eight inches from the floor, and less in accordance with the height of the children who are to use it, is advocated in blackboard placement. The law of attention should also be kept in mind in the placement of all other visual instruction apparatus.

Most schoolrooms are short on storage space. More and more do we need space for school equipment. Progressive methods of teaching make increasing demands for materials. Collections for nature study, lantern slides, posters, books, English papers, and charts, all demand space if they are to be cared for properly. The teacher should use her influence to see that such things are carefully preserved. To keep sufficient storage space for them is essential. The tendency is to provide permanent storage space in the construction of the building rather than to purchase cases to be stood against the wall. No argument need be advanced for ample storage space in the forms of lockers and wardrobes for the use of the teachers and the pupils.

The problem of communication at the school building will doubtless take on new importance now with the coming of the radio. The time may soon come when no school will be considered fully equipped without radio facilities. When it does, suitable arrangements in building construction must be made for them.

Materials needed in the classroom. When one turns to the needs of the classroom other than wall equipment it is evident that both equipment and supplies must be discussed. Equipment has been defined as "any physical object exclusive of structures, supposed to last year after year with reasonable use" and supplies have been defined as "any material or article the use of which results in the physical consumption of the thing used."¹ According to these definitions the furniture in the room, saws, and hammers, would be considered equipment, but paper, cards, ink, glue, and the like would be considered supplies. No attempt will be made in this discussion to adhere to these distinctions, but instead attention will be called to the extensiveness of the classroom needs. In addition to seats, tables, bells, and books, the teacher needs an abundance of materials if she would stress experimentation, construction, and expression as much as is thought best in progressive methods of teaching. More and more do we believe that in education

¹ Case, Hiram C., *Handbook of Instructions for Recording Disbursements for School Purposes*, C. F. Williams & Son, Inc., Albany, New York, page 22.

mental impressions should lead to physical expressions. But physical expressions, if directed in the right channels, require an abundance of materials; how abundant may be seen from the following list of materials which Parker and Temple believe are needed for kindergarten primary work:¹

A. Materials for woodworking:

Carpenter's bench and tools. (The Bureau of Educational Experiments, New York City, recommends the Sheldon bench. If it is not possible to secure a bench, an ordinary table may be used to which two or three vises are attached. For kindergarten children such an arrangement, with hammers, saws, nails, and nail puller, glue, sandpaper, and the necessary wood, constitutes satisfactory equipment.)

Hammers. (Best type is small claw hammer with a flat head—not too light.)

Saws (crosscut, No. 8).

Nail puller.

Wood file.

Brace and bits of several sizes.

Vise.

Ruler.

Nails (wire with flat heads and of several sizes).

Glue.

Sandpaper.

Soft wood: bass, poplar, or white pine; strips of different widths and thicknesses and odd pieces from the manual training shop, including circular pieces for wheels.

Fruit crates, cigar boxes, chalk boxes, etc.

B. Materials and tools for paper construction:

Construction paper.

Manila paper.

Bogus paper.

Oak tag.

Unprinted newspaper.

Crêpe paper.

Tissue paper.

Gilt and silver paper.

Wrapping paper.

¹ Parker, S. C., and Temple, Alice, *Unified Kindergarten and First Grade Teaching*, Ginn and Company, 1925, pages 90-92.

Corrugated paper—saved from packages.
 Paper plates.
 Paper napkins.
 Paper bags—collected and brought by children.
 Paper dolls to be dressed.
 Ribbon bolts—supplied free by some drygoods stores.
 Pasteboard boxes—collected by children and teacher.
 Milk bottle tops.
 Meat skewers.
 Spools.
 Slats—white and colored.
 Adhesive tape.
 Collar buttons.
 Paste and brushes.
 Pins.
 Paper fasteners.
 Thumb tacks.
 String.
 Scissors.
 Conductor's punch.
 Paper cutter.

C. Sewing and weaving materials:

Cloth (substantial, but easily handled, and of different colors and designs).
 Thread.
 Coarse needles.
 Pins.
 Scissors.
 Thimbles.
 Small dolls to dress.
 Cotton roving.
 Jute.
 Strips of cloth for rag rugs.
 Strawboard looms made by the children.

D. Modeling materials:

Clay.
 Plasticene.
 Sand table and sand toys.
 Water colors and brushes.
 Shellac.
 Oilcloth or clay boards.
 Aprons.

E. Materials for drawing and painting:

- Crayons.
- Water colors.
- Fresco paints.
- Enamel.
- Drawing paper.
- Manila paper.
- Unprinted newspaper.
- Chalk.
- Easels and drawing boards.
- Paintbrushes of several sizes.

Such a list as this is a recognition of the importance of materials in teaching. Standard lists for other grades and subjects ought to be more evident than they are. The teacher should then be willing to draw on her time and energy to convince the board and the superintendent of the importance of such materials for effective teaching. As long as such standard lists are not available, it will not be a difficult matter for any teacher or principal to make his (or her) own list that will serve the purpose.

The School Ground. The minimum of school ground space has been estimated at 200 square feet per pupil. Manifestly a specified number of square feet like this becomes unreliable as a measure when the number of pupils becomes small. No one believes that 2,000 square feet of play space is sufficient for a school with an enrollment of ten children. On the other hand, 200 square feet per pupil might serve the purpose very well if there were 1,000 children enrolled in the school. In other words, it seems more probable that there should be a minimum number of acres in the playground for any school, regardless of the size of the school. No one is sure just how many acres are needed for different sized schools. It will depend somewhat on the type of school, the homogeneity of the pupils, and the ideals of education held. Almack and Bursch have suggested the following as sufficient to meet the demands for a school of nine grades with an enrollment of three hundred: ¹

¹ Almack, John C., and Bursch, James F., *Administration of Consolidated and Village Schools*, Houghton Mifflin Company, 1925, page 105.

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Building space, including school, garage, cottages for principal and for teachers, etc.....	1.5 acres
Lawn, shrubs, trees for landscape purposes.....	1.5 acres
Gardens, greenhouses, etc.....	2.0 acres
Poultry pens, rabbit pens, aquarium, etc.....	1.0 acres
Free play space.....	1.5 acres
Tennis courts, basketball courts, baseball grounds, etc.....	2.5 acres
Space for playground apparatus, sandpiles, etc.....	1.0 acre
Bleachers, lunch pavilion, walks, driveways.....	1.0 acre
Total.....	12.0 acres

The tendency is to require more ground for play space. It has been estimated that city schools acquire twice as much ground for playgrounds as they did ten years ago. New interest is being taken in play as an educational factor. More attention is being given to devising games appropriate for play on the school ground. As a result, in the future we will undoubtedly see a still greater expansion in what is known as the minimum playground space.

Caring for the school ground. It is probably safe to say that not too much attention can be given to the school ground. Carefully kept grounds tend to lift the morale and ideals of the school, to make better citizens, and to develop a better appreciation of the worth of education.

Plenty of trees and shrubbery should be found on the school ground. A good grass lawn should be built up and, of course, ash heaps and tin cans should have no place on the school premises. Most teachers do not feel competent to attempt to lay out plans for beautifying the school grounds, but it is easy enough to secure bulletins for such purposes and in addition to this it will be possible in most states to get help on this problem from a representative of the state department of education or from a specialist from the agricultural college. The main thing is for the teacher to be imbued with a purpose and a desire to beautify the school premises. A way will then doubtless be found whereby it can be done.

The School Ground Equipment. Plenty of school ground equipment makes for better health, easier discipline, and better attitudes toward school work in general. To buy outright all

the equipment usually needed for a school makes the cost prohibitive for many communities. By means of home devices, a more practical use of the manual training tools, and a willingness on the part of some of the older boys and girls to help, it is possible for one to secure much of the needed playground equipment at a relatively low cost. Among the more costly types of playground equipment that should be found at every school of the larger type are:

1. Sand bin.
2. Swings.
3. Slides.
4. Horizontal bar.
5. Running track and jump pit.
6. Balls for all types of games.
7. Tennis, croquet, baseball, and basketball equipment.

The cost of this equipment can be materially reduced if the coöperative attitude of helpfulness is shown. Most school communities are anxious to have good schools and they are willing to put money in playground equipment if they are really led to believe that it is educationally worthwhile.

The School Janitor and His Work. The janitor should be looked upon as one of the most important individuals in the school. In a sense he holds the health of the teachers and the pupils in his hand. He is in a position to wield a great influence on the pupils morally, physically, and intellectually. His work is so varied that he must be "handy" at all kinds of jobs. One of the common criticisms of the operation of the school pertains to the inefficiency of the janitor and the difficulty of getting along with him. Often these difficulties are due to the failure to treat the janitor with the sympathetic touch to which he is entitled. In dealing with the janitor it would be well for the teachers and principal to agree with the janitors on certain principles that serve as a guide in the functions he will be expected to perform and the relations he will bear both to the pupils and to the teachers.

There are many things which the teachers and pupils can do that will lighten the work of the janitor and make him look at the world a little more brightly. If teachers and pupils would always help the janitor by keeping waste paper off the floors and the playground, by taking proper care of the lavatories, and by using the ventilating devices intelligently, the burden of the janitor would be greatly lessened.

Certainly the efficiency and attractiveness of the school plant rests upon no other individual quite as much as upon the janitor. For this reason the janitor should be selected with great care and then paid for his service. Studies of the status of the school janitor indicate that he is usually employed at about the age of forty-five and retained until old age and inability deprive him of his position. He is usually defective physically and ranks low in intelligence when compared with other skilled labor. The tendency, however, is to give more attention to the desirable qualities.

Reeves and Ganders have suggested the following as some of the qualifications that should be possessed by applicants for assistant janitor-engineer.¹

1. Present a physician's certificate showing that he has no disease that will endanger the school or interfere with his work.
2. Have no physical defect that will interfere with his work. (In addition to possible observable defects, the applicant's sight and hearing must be tested.)
3. Be able to read, write, and speak the English language.
4. Have completed the eighth grade at school or its equivalent.
5. Present a clean and neat appearance at the time of application.
6. Submit names of reference as to character and ability. Names of previous employers should be given if possible.
7. Be not under eighteen nor over forty-five years of age.
8. Possess an unimpeachable character, good health, good speech habits, the right attitude toward his job, a good nature, sympathy toward children, must be responsible, honest and industrious, and possessed with a scientific attitude toward his work.
9. Preferably should be a non-user of tobacco.

¹ Reeves, Charles, and Ganders, Harry, "School Building Management," *The Operation and Care of School Plants*, Bureau of Publications, Teachers College, Columbia University, 1928, page 10.

The above are not the only qualities a janitor should possess. Doubtless when the civil service examinations are applied more generally to the janitorial group many more qualifications will be required.

One of the great problems connected with the efficiency of the janitor is the training he receives for his job. Not only the training before securing the job but improvement in training while in service. To this end, schools for janitors are being organized in some places and definite training with a view of improving efficiency while on the job is given.

Finally, it should be said that the janitor ought to be a persistent reader of the professional literature in his field. The job of the janitor is being attacked scientifically today, and by men competent in the field of education.

The result of such endeavors is the production of a large amount of literature of a scientific nature. Questions connected with efficiency and economy in the cleaning of school buildings, such as the best ways of sweeping, dusting, scrubbing and mopping, care of the toilet rooms, and many other problems are being experimentally answered. At this writing one of the best publications in this field is that by Reeves and Ganders.¹ More material of this nature can be looked for in the future. In the meantime, steps should be taken to see that it becomes effective in the janitor's work.

QUESTIONS AND EXERCISES

1. Briefly trace the history of school building progress in your state. Is it true that progress in this field has been as great during the past twenty-five years as it has been in any other field of education?
2. To what extent is it true that unattractive poorly designed school buildings affect character?
3. What steps should be taken to guarantee that superintendents of the future will be well informed relative to school buildings and their equipment?

¹ Reeves, Charles, and Ganders, Harry, "School Building Management," *The Operation and Care of School Plants*, Bureau of Publications, Teachers College, Columbia University, 1928.

4. Briefly trace the history of consolidation of schools in your state. What have been some of the greatest obstacles to consolidation?
5. Are there any dangers in the standardization of school buildings? What are they?
6. List all the points that should be considered in selecting a good school site.
7. How are modern school buildings today ventilated?
8. Suppose you are superintendent of schools and that you are erecting a new \$40,000 school building. Would you install steam heat, hot-water heat, or hot-air heat? Why? What are some factors that might determine which you would use?
9. Assume that you are teaching your major subject in your state. Draw up a list of the schoolroom equipment you would need.
10. Make an analysis of the work of the janitor in a high school building of 400 pupils. What should be his relation to the pupils? The teachers? The principal?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XIV

SCHOOL FINANCE

There is an old story to the effect that a lawyer appeared before the judge in behalf of his client. "Why is your client not present?" asked the judge. "Your honor," replied the lawyer, "there are nineteen reasons why my client is not here." "State them," said the judge. "First," said the lawyer, "He is dead." "You need not relate the other eighteen reasons," said the judge, "the one you have mentioned is entirely sufficient."

There are more than nineteen factors that contribute to the efficiency of the school but this chapter is concerned with one major problem, that of school finance. School spirit, community morale, qualified teachers, attendance, curricular and extra-curricular offerings, and many other things are important, but the basic factor is that of finance. If one has the money, he can most probably bring about the realization of all the other factors necessary to a good school. We can expect to get in education only approximately what we pay for. No business can be run without money and in almost every business today the amount of money necessary for operation and output is increasing. So it is with education. Our schools make up a gigantic institution whose expenditure is very large. They must avail themselves of modern thought and science, and this means more cost.

How Much Are Our Schools Costing? At this writing the latest figures for school costs in the United States are for the year 1928-29. In this year the public and private schools of this country spent approximately two and one-half billions of dollars. In 1928 the value of the school property was estimated at more than six billions of dollars. The value of the school property in public elementary and secondary schools alone is

estimated at slightly less than four billions of dollars. As large as these figures seem, they are small when compared to the nation's outlay. The value of the public elementary and secondary school property in the United States is just a little more than one per cent of all the tangible property of the United States. The total current income expended for public elementary and secondary schools has been estimated at 2.44 per cent of the total income of the nation.¹ It does not appear that schools

TABLE 12
PER CENT WHICH PUBLIC SCHOOL COSTS ARE OF INCOME
FOR YEAR 1928²

NAME OF STATE	PER CENT OF INCOME SPENT FOR PUBLIC SCHOOLS	NAME OF STATE	PER CENT OF INCOME SPENT FOR PUBLIC SCHOOLS
Alabama.....	2.74	Nebraska.....	3.95
Arizona.....	3.67	Nevada.....	3.33
Arkansas.....	2.55	New Hampshire..	2.14
California.....	3.25	New Jersey.....	3.20
Colorado.....	3.29	New Mexico.....	3.40
Connecticut.....	2.46	New York.....	2.11
Delaware.....	1.91	North Carolina..	4.38
District of Col....	1.78	North Dakota...	6.13
Florida.....	5.76	Ohio.....	3.05
Georgia.....	1.75	Oklahoma.....	3.27
Idaho.....	4.02	Oregon.....	3.31
Illinois.....	2.28	Pennsylvania....	2.20
Indiana.....	3.93	Rhode Island....	1.89
Iowa.....	3.82	South Carolina...	3.16
Kansas.....	4.24	South Dakota....	5.78
Kentucky.....	2.29	Tennessee.....	2.57
Louisiana.....	2.61	Texas.....	2.57
Maine.....	1.93	Utah.....	3.91
Maryland.....	1.97	Vermont.....	2.24
Massachusetts....	1.85	Virginia.....	2.61
Michigan.....	3.92	Washington.....	2.80
Minnesota.....	3.55	West Virginia....	3.21
Mississippi.....	3.94	Wisconsin.....	2.95
Missouri.....	2.46	Wyoming.....	3.30
Montana.....	3.96		

¹ Data taken from *Research Bulletin of National Education Association*, Volume 8, Number 4, 1930, page 170.

² *Research Bulletin of National Education Association*, Volume 8, Number 4, 1930, page 172.

are costing out of proportion to our ability to pay when one reflects that more than five billion dollars are spent for luxuries each year, and nearly nine billions of dollars for automobiles. Most people believe that public education is the most important business of the nation. If this is true it is reasonable to believe that our schools are not costing too much.

An examination of the preceding table shows that some states spend a considerably greater portion of their income and wealth for school support than others. Generally speaking the states that support their schools adequately are rated as having good school programs. States that support their schools poorly are usually ranked low in educational progress.

Why the Schools Are Increasing in Cost. No student of school finance today will question the statement that school costs are on the increase. It has been estimated that the amount of money raised for taxes during the last century in this country has increased more than five times as fast as the population. The reasons for this enormous increase ought not to be difficult to understand. If the average student in college today will compare what it costs him for clothes with what his ancestor of 100 years ago spent for his wearing apparel, he will not be surprised at an increase in the cost of education. Let the reader of this chapter compare his expenditures for travel, social life, entertainment, and other items with those of his forefathers of 100 years ago and he will find that he gets a contrast rather than a comparison. The world is moving faster today than ever before and education is attempting to keep abreast of the times.

From 1830 to 1895, in nine important crops the increase in efficiency in the case of a single man was 500 per cent, and in the case of barley 2,240 per cent. It has been estimated that from 1840 to 1900, in the case of eight important cereals, the increase in rate of production was twice as great as the increase in population.¹ Probably the labor involved in the production

¹ Cubberley, E. P., *Rural Life and Education*, Houghton Mifflin Company, 1922, page 27.

of a bushel of wheat today is not more than one-sixth of the amount it was seventy-five years ago. Machinery is rapidly replacing man labor. Rapid transit and communication have caused life to move at a rapid pace. Machine industry and social complexity are such as to make much greater demands on education. To meet these demands more and more money is needed. This increased demand for more education may be attributed specifically to certain factors. Among these the most important are the following:

The purchasing power of the dollar has decreased. Most people realize that this is true for every commodity except education. That it is equally true for education cannot be doubted when we reflect that in 1914 the public elementary and secondary schools of the United States cost \$555,077,146 and in 1924 \$1,820,743,936,—considerably more than three times as much as in 1914. This increase in cost is to a great extent accounted for if one will remember that in 1914, 61 cents would buy the same amount and quality of education as \$1.00 would buy in 1924. In other words, it would take approximately \$1.60 in 1924 to buy the same quality of education that could be bought in 1914 for \$1.00.

A much better quality and a much greater variety of education is being demanded by society today. Teacher qualifications are increasing. The old belief that anybody could teach has long since been abandoned. Intelligent parents are demanding superior teachers for their children. One finds in the teaching profession today many of the most brilliant of the nation's young men and women. Many of them are highly trained and receive pay commensurate with their training.

Much progress has been made in this respect. In Susquehanna County, Pennsylvania, "As late as 1842 or 1845 a lady taught for seventy-five cents a week—for a month's service of twenty-five or sometimes twenty-six days."¹

¹ *Annual Report of State Superintendent of Public Instruction, Pennsylvania, 1877, page 523.*

Prior to 1834, there are numerous instances in Pennsylvania where teachers received fifty cents and one dollar a week and "boarded around."

A diary of one teacher who lived in the early part of the nineteenth century shows that she received a salary of \$12 per month and her board. Twelve dollars was not much money and the board was not always attractive, but when the training of teachers in those days is considered, the rewards were probably sufficient to pay for all services received. Today the tendency is in the direction of requiring two years of work above high school graduation for elementary teachers and four years of work beyond completion of high school for high school teachers. With such training and requirements, one must expect more money to be received for teachers' salaries.

Better buildings, more adequate teaching equipment, and more varied offerings are continually increasing the costs of education. There was a time when a single curriculum, embodying only the simple skills, was sufficient to meet the demands. Today curricular offerings are many and the opportunities for a pupil to receive the kind of education he needs have been greatly multiplied. Vocational curricula in the senior high school, exploratory courses in the junior high school, and extracurricular activities in all types of schools cannot help but be a vital factor in increasing educational costs. These, however, are growing evidence that the schools are striving harder to send boys and girls out from our educational institutions better prepared to live.

The increase in school attendance has grown rapidly. There is no more phenomenal feature of American education than its rapid increase in attendance. Free schools and a growing desire on the part of teachers to make children want to go to school have aided greatly in stimulating attendance. In addition to this, every state in the Union has passed compulsory school laws augmenting the enrollment. Increased attendance means more teachers, more buildings, and more money to support schools. The effect of increased attendance on school costs may be seen in the following statement:

"Between 1914 and 1926 the total number of days' schooling provided in public elementary schools increased from 2,112,-197,000 to 2,850,327,458, while the days' schooling provided in public high schools increased from 143,460,000 to 510,907,-752. The growth in attendance was over seven times as rapid in high as in elementary schools.

"This fact has an important effect on the burden placed upon the schools due to an increasing attendance. Every additional day's attendance in high schools costs approximately two and one-half times as much as an additional day's attendance in elementary schools. Therefore, in arriving at a true indication of the financial burden placed upon the schools by attendance, a day's schooling provided in high school should count two and one-half times as much as one in elementary school.

"When this principle is accepted, and the calculations are made, one obtains the number of weighted day's attendance in the public schools over a series of years. The figures for weighted days' attendance are the same as days' attendance as ordinarily understood, except that a day's schooling provided in high school is given two and one-half times as much weight as one provided in elementary school.

"The number of weighted days' attendance increased from 2,470,847,000 to 4,127,597,000 between 1914 and 1926. This is a sixty-seven per cent increase. Growth in attendance, therefore, justified an increase in school costs over this period of sixty-seven per cent. Sixty-seven per cent of \$555,077,000, the cost of schools in 1914, is \$371,901,590. This is the part of the increase in school costs, between 1914 and 1926, chargeable to growing attendance. If this amount is added to the cost of education in 1914, the resulting sum is \$926,978,590."¹

Sources of School Support. The money spent in the support of any school system is likely to come from one or more of the following sources:

¹ *Research Bulletin of the National Education Association*, Volume 6, Number 5, pages 286-287.

Local. The local revenue is very largely derived through taxation. The local revenue is approximately seventy-two per cent of the total revenue. The state furnishes approximately twenty-three per cent and the Federal government a little more than five per cent. Tuition, fines, and bonds account for a part of the local revenue. Every teacher going into a community could well afford to acquaint herself with the sources of revenue in her school system. Such information can usually be obtained from members of the school board, other citizens of the community, or the school laws.

The state. The state funds that are used for the support of schools are derived in two ways: (1) By income from permanent funds. (2) By taxation: There are many states in the Union that have what are known as permanent school funds. These funds were largely received through the sale of public land grants, federal loan funds, or federal mineral royalty grants. In several states this income is sufficient to be a factor in school support, especially in some of those states profiting from the royalty funds. According to a United States Bulletin of the Bureau of Education, Number 47, 1922, there were eight states during the two years 1921 and 1922 that received nearly eighteen million dollars from this fund. Almost all of this fund went to two states, California and Wyoming. California uses the revenue from this source as a state junior college fund. Some states, however, do not apply all such funds to education. But while some states profit materially by a permanent school fund, most of them do not have a fund large enough to be of any great assistance. In many instances the holdings were sold at such a small price (land sometimes selling for \$1.25 an acre) that the fund is not very large. In other states poor management has greatly depleted this fund.

Most of the school fund which the state furnishes comes from the taxation of the state's wealth. The percentage of the total school cost borne by the state varies greatly among the different states, and for that reason the percentage of the state fund derived through taxation is difficult to estimate. Our public

schools are tax supported, however, since more than ninety per cent of the total school budget (state and local) is raised through taxation.

National. The Federal government is aiding many schools in the United States in their offerings in vocational education. If the reader happens to have attended a high school where a vocational curriculum was offered, it is very probable that the vocational teachers in that high school were paid in part by funds from the Federal government. Many people believe that in the near future the Federal government will participate to an even greater extent in the support of education.

School Economies. While schools are costing a great deal, and while the cost, as we have seen, is steadily increasing, it is encouraging to know that more than ever before school administrators are turning their attention to school economies. There are many ways being devised and discovered through experimental research whereby school economies are being put into effect. Among these may be mentioned the following:

Class size. For a long time it was supposed that the teacher's efficiency was curtailed if she had more than thirty or thirty-five pupils in a class. A number of school standards and school accrediting associations have gone on the hypothesis that if teachers had more than thirty or thirty-five pupils in a class, teaching could not be as successful as it could be if they had fewer pupils. No one knew this from experimental research but it was more or less accepted by agreement. Recently, however, experimental research carried on at the Ohio State University and the University of Minnesota, has shown that school authorities have been greatly underestimating the number of pupils that could be taught successfully by one teacher.

According to the experimental evidence it is probable that a teacher can handle from forty-five to fifty pupils almost as successfully as she can the smaller groups. In other words, data indicate that classes can be materially larger than we have thought in the past without in any way lessening the efficiency in teaching. If this is true, it will result in a great saving in

cost in that fewer teachers will be needed. It is a well-known fact that approximately fifty-five per cent (seventy-five per cent of current cost), of the whole school budget goes to teachers' salaries. If, then, one can greatly reduce the number of teachers needed it will, of course, have a material effect upon the school budget.

School attendance. As a second school economy we may mention school attendance. Where attendance is poor a great deal of money must be wasted in schools. School buildings, school equipment, and the number of teachers must be sufficient to take care of the maximum number of children that will be enrolled. Necessarily, then, if the number of children enrolled is considerably more than the average daily attendance, it means that the maximum use is not made of the school buildings and teachers that are provided. In other words, high percentages of absences in school cannot help but mean that the school expenditures are not being put to the maximum use. With our compulsory school laws, better facilities for teaching, and more attractive schools in general, we can expect that real school economy will be brought about.

Failures. Failures in school mean greater educational cost. If the per capita cost in a certain school is sixty dollars, it must mean increased educational cost for every pupil that has to repeat a grade. The percentage of failures in some schools in the past has varied all the way from almost nothing to as high as twenty-five or thirty per cent. Recently this high percentage of failures has been greatly reduced in many schools. Probably a typical illustration is that reported to one of the authors recently by a prominent school superintendent who made this statement, "Five years ago, when I was appointed superintendent of the school where I am now located, the percentage of failures in the grades averaged fifteen per cent. This year our average percentage of failures for the whole school will be less than four." Such a record as this, of course, means reduced school cost. It not only means a saving in dollars, but probably means a still more important saving brought about by a reduction in the lost hopes and blasted ambitions of the boys and girls.

Rapid promotions. Necessarily, as it means an additional expenditure every time a pupil must repeat a grade, it must be a saving of cost to the taxpayers every time a pupil successfully skips a grade. Many schools nowadays are giving a great deal of time and attention to the question of rapid promotions. In some instances pupils are doing two years' work in one, in others, three years' work in two, and in still others the retarded pupils are being coached by special teachers, thus saving time from repeating the work.

School economy through buildings. More attention is being given to planning school buildings today than ever before. In every state in the Union at present one can find school buildings erected which have proved too small to accommodate the growing community. In many instances these buildings have been built so that additions could not be made and consequently an entirely new building had to be built to take care of the increased enrollment. In hundreds of other instances school buildings that were built were not planned at all in keeping with the school needs in that community. Such a process of school building, of course, meant much additional school cost. This is rapidly being overcome today and in some of the state departments of education a special school building representative is employed whose business it is to give expert advice on school building and planning.

School economies through better accounting. Much is being saved the schools today through a better system of accounting and keeping track of expenditures. Teachers are being made more and more conscious of the importance of economizing in supplies, of saving in coal, lights, crayons, and other items. Saving in such ways together with the saving in costs in buying larger quantities will doubtless prove of tremendous importance.

How Shall Our Schools Be Supported? In asking the question "How shall our schools be supported?" reference is here made to the extent to which support should be borne by the states and the extent to which it should be borne by the local community. At present the amount of money contributed by states

to school support is increasing, but the percentage of the total school cost being borne by the state is apparently decreasing. There is considerable difference among states as to what per cent of the total school cost is being borne by the state. The following illustrates the great differences that exist among states in the percentages of school cost borne by the state.

TABLE 13

PER CENT OF TOTAL SCHOOL COST CONTRIBUTED BY THE STATE ¹

NAME OF STATE	PER CENT
Delaware.....	71.55
Texas.....	39.68
Utah.....	37.28
Mississippi.....	36.61
Alabama.....	35.16
Kansas.....	1.75
Indiana.....	.15
Colorado.....	4.61
Iowa.....	4.62
Rhode Island.....	4.72
Florida.....	3.99

From the above it will be seen that states vary materially in the percentage of school expenditures borne by the state. While the present tendency is toward decreasing this percentage it is probably safe to say that school authorities would advocate its increase. Recently one of the best authorities in school finance advocated for a certain state complete state support. It is doubtful, however, at present if this recommendation represents the majority of the best thinkers in public school finance. Somewhere between complete state support and no state support is the opinion held by most students of school finance. That we have a state school system is a strong argument for the state's bearing a large portion of the burden of education. The inequalities between local school systems in their ability to support schools is so great that the burden of education cannot be equalized until the state bears a considerably larger portion of the school costs than it is assuming at the present time.

¹ *Research Bulletin of National Education*, Volume 4, Number 4, page 213.

One can turn to a number of studies to illustrate the great inequalities that exist educationally between communities, and also the great inequalities that exist in their financial abilities. For example, a study made recently in the state of Kentucky shows great inequalities between counties in their ability to support schools, as given by different measures of ability.¹ The assessed wealth per census child of the different counties in the state of Kentucky varies all the way from \$616 in Elliott County to \$8,694 in Fayette County. The true wealth per census child varies from \$936 in Elliott County to \$16,835 in Jefferson County. The wealth per capita shows Jefferson County with thirteen times as much wealth as Elliott County and Fayette County with twelve times as much as Jackson County. The income per census child in Leslie County is \$318, while in Kenton County it is \$4,806; and finally when one combines true wealth and certain population percentages as a measure of ability he finds some counties 90 or 100 times as able to support schools as other counties. The inequalities mentioned here are so great that, if local communities must support their own schools, one must always expect great inequalities in the educational opportunities offered the children. Most school authorities agree therefore that school support must be a joint proposition between the state and the local community. That the local community should bear a part of the burden is generally agreed. One of the strongest arguments in favor of the local community's bearing part of the school costs is that it gives the local community an opportunity to manifest some initiative and by this means show greater interest in its school. The belief is generally held that if all school support comes from the state that the state would for the most part have complete control of its distribution of funds and would thereby cause a lack of interest on the part of the local community.

¹ Adams, Jesse E., "A Study in the Equalization of Educational Opportunities in Kentucky," *Bulletin of the University of Kentucky*, Volume 20, Number 9, 1928.

The Problems of the State in School Support. The state as a factor in the support of schools has many problems which must be solved. Among these are:

The state's contribution. How much money should each state put into school support? No one can answer this question until a decision has been made on the plan which shall guide the state in its share of support. There are two principles of vital importance to the state when it undertakes to decide how much money it will contribute to the local community for the support of schools. The principle of stimulation is one that has been advocated very largely in the past. By this principle is meant that the state will give to the local community for school support not as much money as it needs but only that amount of money which will stimulate the local community to put forth greater effort. The trouble with this principle is that it frequently urges the local community to put forth more effort than it is able; in other words, it forces the poor community, the one that needs money from the state most, to raise its tax rate higher than the wealthy districts. As a matter of fact, the poor districts are not able to pay as high a local tax rate as the wealthy districts. Certainly, then they are in no position to pay a rate still higher than the wealthy.

Somewhat opposed to the principle of stimulation is the principle of need. The principle of need usually involves a scheme whereby all local school communities will pay the same school tax rate and then whatever each lacks of having what it should have to support a certain standard of school will be procured from the state. This means that the poorer communities will get a greater percentage of their school budget from the state than will the wealthy communities. This seems a very fair principle, however, in view of the fact that those who have the least wealth are the least able to support their schools. Any endorsement of the principle of need, however, forces one to undertake to answer the question of how to know when a community is wealthy and when it is poor. Probably most students in first courses in education have not thought seriously about

this question. Is your town or community a wealthy town or community or is it a poor town or community? How would you answer the question? There are a number of measures of the ability of communities, none of which is entirely satisfactory but all of which taken together doubtless give a rather fair index of the ability of the community to support schools. Among these measures are: the tax valuation, true wealth, income, and ratio of number of children to number of adults.

1. **THE TAX VALUATION.** If one takes the assessed valuation of his community and divides it by the number of children in the school, or the number of children in the school census, or the number of teachers employed, or the population, he will secure a measure of the community's ability to support schools. The greatest objection to assessed wealth as a measure is the fact that assessed wealth may not be anywhere near what the actual wealth is. That is, some communities assess their wealth at a great deal less than its value while others assess it at its full worth.

2. **TRUE WEALTH.** A second measure of the ability of a community to support schools is its true wealth or real wealth. By this we mean not what its wealth is assessed at, but what its wealth actually is. If a community is assessed at sixty per cent of its wealth, then one can divide the assessed wealth by sixty per cent and get the true wealth of that community.

3. **INCOME.** A third measure of the ability of a community to support schools is the amount of its income. If every individual in the community would keep track of his income for a year the total incomes of all the people in the community would be the income of that community. Income is an excellent measure of a community's financial ability and will doubtless in the future be recognized more and more as a measure. Income taxes are a recognition of the fact that the community that has a large income is more able to support its schools than those communities that have small incomes.

4. **RATIO OF CHILDREN TO ADULTS.** A fourth measure of the ability of a community to support schools is the ratio of the

number of children to the number of adults. A community that has a large number of adults, able-bodied and all of working age, and few children to be educated is more able to educate its children than is another community where there are a great many children to be educated by a few adults. Therefore, it is gratifying to know that recently certain authorities in school finance are recognizing the ratio of adults to children in a community as one measure of that community's ability to support schools.

How should the state distribute its money? A second problem which the state faces in school finance is how it should distribute the money which it contributes to the local community. If the state should get its money, for example, by a tax on all the wealth of the state, and then would hand it back to the local communities in the proportion in which it was paid, each local community would get back only what it had paid and would be no better off than it was. If, however, the state distributes the state school fund according to the number of children of school age, those communities that have the most children and the least wealth will get back a great deal more than they pay in, while other communities will get less.

Financial authorities are not at all agreed on the best method of distributing a state school fund. Some states distribute it on the basis of the number of teachers; others, on the length of school census; others on the basis of average daily attendance, and there is an increasing number of authorities today who are advocating the principle of need as the basis of distribution. According to this principle, as has already been stated, each local community would get the amount of money required to assure a minimum educational standard. A number of the best authorities in school finance today are studying this problem and doubtless in the near future there will be much more unanimity of agreement on how state school funds shall be distributed.

Sources of revenue. A third problem which the state must solve has to do with the sources of its revenue. Where shall the state get its money with which to help the local community?

There is probably less unanimity of opinion on this point than either of the other problems facing the state. In the past there has been a considerable tendency for the state to get its money through a direct tax on real estate. There is no doubt that the state must secure the major part of its money by a direct tax, but this does not mean that the tax must continue to be put upon the real wealth of the state. There is a growing belief that the state should tax income rather heavily for state school support. Also, in a number of states they are placing a tax on sales of luxuries such as tobacco, cosmetics, and other items usually classed in the luxury list. In other instances taxes on theaters and theater tickets are being advocated. Some are advocating taxes on coal and mineral resources because they are taken from the ground. Many authorities are studying this problem and much research is being done in this field, but no one can say definitely at this time what the sources of revenue should be.

The Local Problem. The local community faces certain problems in school finance, but for the most part they are not the problems that confront the state. Among the problems confronting the local community are the following:

To raise the money which the local community contributes. As we have already seen, a great part of the money which goes to the support of schools is raised by local communities. To secure this money is not always an easy matter. Some communities are very conservative and it is difficult for them to see the value of education. In many cases where the law permits a high enough tax rate for the local communities to contribute well to school support, the people refuse to vote the tax. It takes a wide-awake and alert superintendent and school board sometimes to arouse a community to the needs of a school. Almost all schools are faced with a shortage in finance, library support, and school equipment. In many instances the local community faces the problem of raising the money for these commodities through local initiative rather than by means of the regular tax rate.

Spending the money wisely. A second problem which the local community faces is that of spending its own money and that which the state contributes wisely. In its attempt to spend wisely the money which it gets, most school systems have adopted the plan of making a budget. The budget is simply a statement of expected income and proposed expenditures for the ensuing year. Whole volumes have been written on this subject. The school budget is usually made by the school superintendent in coöperation with his teachers. It is then presented to the board for adoption. After it has been adopted it becomes the business of the superintendent and the school board to execute it.

The proposed expenditure, that is, the budget, is usually made up or should be from thirty to sixty days prior to its adoption by the board. Superintendents are usually urged to stay within the budget, that is, not to spend more money during the year than they proposed to spend. Sometimes, however, circumstances arise which make it absolutely impossible for the superintendent to stay within the budget. Ordinarily the budget is divided up into the following divisions—general control, instruction, operation of plant, maintenance of plant, auxiliary agencies, fixed charges and interest, and debt service. These divisions are divided and subdivided. Estimates are then made for each subdivision as accurately as possible. What per cent of the total budget should go to each one of the items is still a question. Although some standards have been worked out for different systems, they will vary considerably from one community to another. The item for instruction is always the largest part of the budget, varying from sixty to eighty per cent.

The local community, in order to spend wisely the funds entrusted to it, faces also the problem of accounting. Most school systems have not given enough attention to this subject. Teachers have not thought seriously about it. It ought to be possible in every system to find unit costs for different items. There should be standards rather carefully prepared whereby teachers could know whether they are using too much crayon,

and whether they are extravagant with any kind of supplies. It ought to be possible for a superintendent to know whether a stove or furnace is using too much coal by knowing what similar furnaces and similar heating units need. Better systems also ought to be provided for internal accounting within a school system. Probably not many public school systems today can give an accurate statement of their expenditures and receipts for athletics, bookstores, lunch rooms, plays, and entertainments.

Such problems and many others need careful study. The problem of debts is one the local community has to face. It is probably true that a school that is not in debt is an exceptional one. Debts incurred by schools usually fall under two headings. Either they are short-term borrowings which are to be paid back within a reasonably short time or they are long-term borrowings, and in such cases are usually issued in the form of bonds. Most school communities, when they want to erect a school building, do so by issuing bonds to be paid off at a much later date. If these bonds fall due in such a way that they are to be paid periodically or serially they are called serial bonds, but if they are to be paid all in a lump sum, say twenty years from the time they are issued, they are called term bonds. Ordinarily, serial bonds are considered better since it is easier for the community to meet a small portion of its bonds at a time rather than all at one time.

School accounting and school budgeting make such a big problem that it can only be touched on here. Much work is being done today in this field and doubtless within the near future one will find that most school systems will have much more carefully prepared accounts than they have now.

Financial control. A third big problem facing the local community is this,—who should control the school finance? That is, should the school board and superintendent of schools decide how much money is to be used, how to raise the money and how it shall be spent, or should some municipal authority have the major voice in this problem? In other words, should the local court of the local county or city council pass on school

finances instead of the school authorities? Many arguments for and against having municipal authorities take a hand in school finances have been advocated. The following are typical of the arguments for municipal control:

1. School expenditures consume from one-third to one-half of the tax income of the average city, and for this reason those who spend this great sum of money should be responsible to those who collect the taxes. Too much independence in this respect will demoralize a school board.
2. The superintendent who often is the real controller of the school funds is not responsible directly to the people, but instead is elected by a school board.
3. It is not wise for those who spend money to have the final word in determining the budget.
4. In the past, many school boards have used unwisely moneys entrusted to their care.
5. When school boards are independent of other municipal authorities duplication of work within the municipal departments is often found.
6. School boards, with direct control of school buildings, often deprive the people of their use.

Arguments against municipal control:

1. The schools are not a municipal department like the fire department or the police department.
2. Practice has shown that it is much better for the school board and school superintendent to handle the finances.
3. Educational policies are more likely to be found where school finance is independent of municipal authorities.
4. Municipal independence tends to keep politics out of schools.

While many other arguments might be given, these are typical of the situation. The tendency is decidedly to separate school budgeting, accounting, and expenditure from that of municipal control.

QUESTIONS AND EXERCISES

1. What per cent of the school costs in your state is supplied by the state? From what sources does the state get its money?
2. What causes other than those mentioned in this chapter might contribute to the greater cost of schools today?
3. Discuss the merits of the principle of stimulation and the principle of need in school support. Could both principles be utilized in the same plan?
4. Since the inequalities between states are so great would it be wise for the Federal government to furnish all the money for school support? Why?
5. List the major factors in the cost of any school? Is it true that these costs would be reduced if there had been no failures in the school? How?
6. If you wanted to know whether a community was able to support its schools, what factors would you use in the measurement? Would several factors be better than the factor of income alone?
7. Can you give any illustrations wherein it seemed to you that your local school board spent money unwisely?
8. Suggest ways whereby teachers and school administrators might become more influential in tax reform in your state.
9. Is it just as essential that the state give money for the erection of school buildings as it is to increase teachers salaries? Why?
10. Suppose your state wanted an additional \$10,000,000 for a state aid fund for school purposes? Where would you recommend that the state get the money?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XV

SUPERVISION

Not long ago a state supervisor of schools and one of his friends went to visit a negro school. When the supervisor and his friend entered the school building they found a group of children eagerly and interestedly encircling the teacher. They were studying fractions and the teacher was using a wheel to demonstrate the different parts of a whole. The pupils were intensely interested in the discussion. When the teacher saw the supervisor enter the room she hurried all the children to their seats, rushed around the room picking up any particles of paper or crayons that might be on the floor, hastily looked to see that the shades were properly adjusted, and gave orders that the children should see that their desks were clean. Both teacher and pupils took on a dignified reserve, in hopes that they might please the supervisor. As the supervisor left the room his friend said to the teacher, "Now you go on with your teaching just as you were. You were presenting an interesting lesson and evidently you were using good methods of teaching." And so the recitation was again resumed, but not perhaps with the same interest and eagerness.

This incident is more or less characteristic of what has too long been an attitude toward school supervision in many school systems. In the past, supervisors have been more interested in the mechanics of teaching than they have been in the real essence of teaching. This negro teacher knew the supervisor and she probably knew more than the supervisor did about teaching. The action of this teacher is evidence that the so-called supervisor here was not a supervisor at all but only an inspector, one who wanted to make himself felt in the schoolroom, one

who, as someone has expressed it, "probably wanted to put the fear of God into the teacher's heart." This attitude so often expressed in the past has been the cause of more unhappiness in supervision than anything else. Yet today this is the feeling too often held by teachers toward supervision. Not long ago a questionnaire sent out to teachers asking them certain questions about supervision brought forth among others the following three typical remarks:¹

1. I miss the principal's supervision; however, I do not expect it; in fact, I do not want supervision by a principal in these city high schools because he could not possibly give adequate and well-thought-out advice. A principal cannot supervise and be an executive unless the school is comparatively small, say less than 1,000.

2. Do I, a highly trained specialist in my subject, want supervision from a principal? I should say not. Most of them are too ignorant of what I am trying to do to offer worthwhile advice.

3. I spent five years getting ready to teach my subject. Do you suppose I want a principal who knows less than I do about my subject coming in and interfering with my subject?

Such attitudes as these indicate that something is wrong with supervision. Supervision must be a coöperative enterprise. It necessarily must rest on a sympathetic feeling of relationship between the teacher and the supervisor.

What Is Supervision? There are almost as many definitions of supervision as there are authorities in the field. One reason for this is that the definition one gives of supervision depends upon the angle from which he looks at it. Barr and Burton have pointed out that there are at least four standpoints from which one might study supervision.²

One way is to go to the teachers who are to be supervised and ask them what problems they face, let them make a list of the difficulties they encounter in their teaching, and then frame the definition of supervision in such a way that it will cover the activities involved in helping the teachers with these problems.

¹ Saunders, Olga M., "What the Teachers Want from the Principal in His Capacity as a Supervisor," *School Review*, October 1925, pages 611-612.

² Barr, A. S., and Burton, William H., *The Supervision of Instruction*, D. Appleton and Company, 1926, page 3.

One can go before any group of teachers and ask them to submit a list of problems with which they are having trouble and in the solution of which they would like to have help, and he can find a long list of intelligently stated problems, manifesting great need for a supervisor who is able to give the needed help. A number of groups of teachers were recently requested to submit such lists, and among the problems stated on which they needed help are the following: the best way to diagnose reading difficulties; how to improve the reading rate; what to do with a child who is weak in word recognition; how to find what the trouble is in discipline; what is a good writing position; in what grade should one begin writing with a pen; what kind of supplementary material should accompany certain grade subjects and where can one get this material; when to use oral spelling; how one can know the subjects of greatest value; how to meet individual differences; how to make a schedule for rural schools; how to keep the bright children from answering all the questions in class; how to test a child who is believed to be subnormal; where to find grade norms for different subjects; whether one should keep pupils in after school; if a pupil makes an error in English in telling a story should it be corrected at the time he makes it or should one wait until the story is completed; should left-handed writers be encouraged to write right-handed; how to produce the "mind-set" which the psychologist talks about; how to organize a socialized recitation. This list could easily be made three times as long as it is here, but this is sufficient evidence that teachers have problems to solve and that they feel the need of help. Repeatedly they have said that if a good supervisor who could answer their questions could come to them and proffer the needed help, they would vote one hundred per cent for supervision.

Another way of attempting to answer the question, what is supervision, would be to ask the supervisors themselves what they do as supervisors. Although their answer might be that they do those things that will help teachers to teach better, nevertheless one would find a great difference in the list of

activities which supervisors undertake and the list of helps which teachers need.

The third way in which one might view supervision would be to ask the specialist in college who teaches supervision what he believes supervisors ought to do.

A fourth way to answer the question "What is supervision?" is to ask administrators what they expect of supervisors.

Although there will be considerable differences in the lists made up by teachers, supervisors, and college authorities on supervision as well as by administrators, it is not impossible to frame a definition that covers rather completely the activities which a supervisor should perform. Many definitions of supervision have been promulgated, but the substance of more recent definitions seems to be this: "Supervision exists for the improvement of teaching, and any acts which supervisors perform that are an aid in improving the teaching act either immediately or ultimately should be classed as supervisory acts; the performance of these activities is supervision."

In thinking of the teaching process one must consider the pupil, the teacher, and the experience which the teacher is helping the pupil to get. The activities performed by the teacher in her attempt to bring the pupil and the experience closer together may be classed as a teaching act; any act performed by the supervisor in helping the teacher to do this better may be called a supervisory act. Conversely, then, it should be clear that any act performed by the supervisor which does not aid the teacher in performing the teaching act is not supervision. For example, a supervisor may come into the classroom with a tone and an air that make the pupils and the teacher nervous, and then go out again leaving the teacher less well prepared for teaching than she was before the supervisor entered the room. Such an act, although performed by the supervisor, is not a supervisory activity.

Why We Need Supervision. Since supervision exists for the improvement of teaching, one may infer that teaching is never perfect and is always capable of being improved. This is always

true. There are many reasons why teaching does not improve more rapidly. In the first place, approximately eighty per cent of the entire teaching force, and ninety per cent of the teaching force in the elementary school are women. This necessarily means a heavy turnover every year in the teaching force. New teachers by the thousands must enter the teaching profession every year. These teachers must go through the process of adjusting, no matter how well trained. They must learn how to weigh values. They must learn how to put into effect their psychology and methods which they have learned in the colleges. One can hardly hope that the day will come when there will not be a large turnover in the teaching profession as long as it is made up of women, most of whom are single. It is evident that thousands will be leaving the profession every year. In fact, the average length of experience for the teachers in the United States is six years. In other words, on an average there is a completely new teaching force in the United States about every six-year period.

A second reason why supervision is needed is that the teachers who enter the profession are not well qualified. A recent study made in Kentucky shows that on October 1, 1930, approximately one-fourth of the 21,153 teachers' certificates held in that state were based on sixteen semester hours of work above the high school; approximately one-fourth were based on two years of college work; and less than one-sixth of the total number based on four years of college work.¹ A number of studies in other states have reported similar findings. Teachers enter the profession unqualified both quantitatively and qualitatively, that is, they do not have a sufficient amount of training, and the training they have is not of the right quality.

In the third place, even if teachers were properly trained and there was a very small turnover in the teaching profession, supervision would still be needed to help the teacher make adjust-

¹ Quoted from an unpublished study by Warren Peyton, Director of Certification, State Department of Education, Frankfort, Kentucky.

ments to new school situations and new teaching processes. A teacher who has learned to adapt herself well in teaching the sixth grade in Detroit might find an entirely different set of problems facing her if she were to be transferred to the city of Chicago. Supervision is needed to help teachers make new adjustments when they change school systems or change teaching processes within the same school system.

In the fourth place, a change in the organization or administration of a school system in which a teacher finds herself may involve many new adjustments for the teacher, and again a demand would be made for supervision.

Kinds of Supervisors. Supervisors may be classified on different bases. From the standpoint of the functions the following classification might be made:

1. *General supervisor or special supervisor.* A general supervisor is considered as supervising a rather broad field such as a supervisor of the high school. The special supervisor is one who supervises a more restricted and more specific field, such as a supervisor of music or a supervisor of the third grade.

2. *The unit supervisor and the subject supervisor.* A unit supervisor is one supervising a whole school unit as, for example, in the supervision of all the work in a certain building or a certain county. A subject supervisor is a supervisor whose business it is to supervise one subject only, such as a reading supervisor, a writing supervisor, or a music supervisor.

3. *The principal or superintendent and the regular supervisor.* The superintendent and principal have a twofold function. They are administrators and usually supervisors. For the most part, school principals, especially in the graded schools, are so busy with administrative duties and teaching that they do not have time to supervise. In the second place, they have not usually had the type of training needed for supervision. Supervision will be in a much better position from the standpoint of the smaller schools when principals are trained for supervision and when we recognize that the best supervision is done by those who expect to make supervision their business.

The regular supervisor is a supervisor whose only business is supervision. She should not be mixed up with administration and organization and should not attempt to be a "jack of all trades." To supervise and do it well is all that could be expected of any one person.

Supervisors might also be classified on the basis of their most outstanding characteristic. A number of writers have classified the supervisors on this basis. Wagner ¹ has classified undesirable types of supervisors in the following way:

1. The "detective" type. This is the type of supervisor that peeps through the key-hole at the teacher, that listens with her ear against the door to catch what she can. It is doubtless this type that prompts teachers as in one instance to leave the classroom doors open so that they can see when one of the pupils, with a small olive bottle in his hand, walks down the hall. When this boy walked through the hall with an olive bottle, it was the signal that the supervisor had arrived and was somewhere in the building.

2. The "hummingbird" type. This is the type that breezes in and breezes out with no hint at coöperation.

3. The "Sphinx" type. This is the type that has nothing to say. Teachers are left to guess whether their work is satisfactory or unsatisfactory.

4. The "fish-wife" type. This is the type that not only must get a hearing, but must be heard, speaking in good loud tones.

5. The "nettle" type. Under this heading we find supervisors who are easily nettled, always looking for and finding flaws. They are not only easily nettled but make it unusually easy for teachers to become nettled when they are around.

6. The "machine" type. This type of supervisor insists on rigid adherence to rules and regulations. With such a supervisor it is not improbable that the good of the child will be side-stepped for the sake of the administrative machinery.

¹ Wagner, C. A., "Some Types of Misconceived Supervision of Instruction," *American School Board Journal*, Volume 66, May 1923, pages 37-38.

7. The "bully." Here one finds a domineering personality, usually weak in training and lacking in self-esteem, so that he is trying to make up for these shortages by a bullying attitude.

8. The "zero" type. Here one finds supervisors holding their jobs not because of their worth, but because of political pull or some other force external to themselves.

9. The "flywheel" type. This type of supervisor lacks vision. She cannot see outside of the little circle in which she has always moved.

10. The "composite" type. All undesirable supervisors listed above come under this type.

Other authorities have classified supervisors according to their outstanding characteristics, and in the list we find such types as the swivel-chair artist, the dictatorial type, the cynic, the destructive type, and the inspector. It should not be interpreted, however, that all supervisors are of the undesirable type. One often finds an open-minded supervisor who knows her job and knows it well, who is sold on helping teachers teach better, and who realizes that the basis of supervision is coöperation.

Attitude toward Supervision. The outstanding attitude in the past on the part of teachers toward supervision has been one of opposition. Surveys tend to show that teachers do not want their work molested by supervisors. There are many reasons for this. One reason is the fact that in the past supervisors have been untrained. In many instances school systems have decided they wanted supervision and have employed as supervisors teachers whose training and experience in many cases were no better than the training and experience of those they supervised. No one can prescribe definitely today the qualities a supervisor should possess. It is safe to say, however, that she should have at least one year of training beyond the teachers supervised, should have a minimum of two years of successful experience as a teacher, and should have special training for supervision. This would mean that a considerable part of her training should be taken in the field of education, including such subjects as educational psychology, tests and

measurements, health and hygiene, philosophy of education, courses in the curriculum, and further courses distinctly in the field of supervision. Since some of the states today are tending to require college graduation for the highest form of teaching certificate, unquestionably a supervisor should at least hold the equivalent of a four-year-training certificate above the high school, and it is probable that many would agree that a supervisor should have had some graduate work before attempting to supervise.

A second reason why teachers have been opposed to supervision has been due to the way supervision was conducted. The supervisor has too frequently made a hasty visit to the classroom and not having a constructive suggestion has praised the teacher for the excellence of her work and gone on her way. This does not raise supervision in the estimation of the teacher who has analyzed her teaching and knows she has difficulties to overcome. The wide-awake teacher who knows that there are many weaknesses in her work will soon lose respect for the supervisor who sees nothing wrong and has no suggestions to make.

Another trouble with supervisors in the past has been their reliance on general impressions of the work rather than on an objective analysis. A lecturer in education once remarked that he was willing to grade the teacher's success on the basis of the smell of her schoolroom. It is true that a teacher who fails to keep the schoolroom properly ventilated manifests a weakness, but this is just one of a number of points that ought to be considered in measuring the worth of her work. General impression and appearance as a measure of a teacher are rapidly being replaced today by a careful, systematic, objective analysis of the teacher's work. As long as smell and general impression are the only measures of the teaching job, and as long as the only help teachers get is a little praise or a scathing criticism with no constructive suggestions, one may expect that they will continue to comment on supervision in the following way: "We don't like supervision"; "Teachers hate supervision." The attitude that should exist and is rapidly being built up today

toward supervision is one whereby supervision is appreciated and wanted. If this attitude is to continue and be disseminated more widely, it must be recognized that the relationship among the teachers, supervisors, and principals must be above criticism. This can be done by a more careful working out of the responsibilities of a supervisor and the responsibilities of the administrator. Undoubtedly the principal of a school building should be given a great deal of authority over his building. A supervisor should not be permitted to come into the building and give advice to the teachers that would disrupt the system without permission from the principal. In fact, there is a growing belief among authorities on supervision today that a supervisor should not go to a building to supervise until she is called by the principal. The following scheme should work successfully.

Let the principal be trained so that when pupils are not doing satisfactory work he can recognize the difficulty; but in as much as he is not a specialist in supervision he will not be expected to diagnose the difficult cases needing supervision, nor should he be expected to prescribe the remedy for them. Rather, his job will be simply to discover the cases which are not normal and which need some sort of supervision or prescription. Now when the principal finds a case needing a prescription, instead of giving his own remedy he will simply step to the telephone and call the specialist, the expert supervisor, who will come to the building and after talking to the principal will diagnose the difficulty and prescribe the remedy to be carried out by the principal and teacher. This would seem almost exactly analogous to calling a physician at the time of illness. If only a home remedy is needed, the building principal may prescribe the remedy without the supervisor, but otherwise a specialist will be called. Such a plan would insure two things—first, that the supervisor would spend her time where she is wanted, and second, she would spend her time where she is needed.

A plan similar to this has been used in the Detroit public schools for some time, and is succeeding admirably in building

up a fine attitude toward supervision. This should not be taken to mean that supervisors should never visit a teacher except on call. There are times when the supervisor should visit the teacher to learn good methods and at other times in order to help the teacher discover her own weaknesses. The old attitude was for the supervisor to try every way possible to keep the teacher from knowing when she was coming to the school. The newer plan is for the supervisor, when she goes to a building without being called, to notify the principal and teacher that she is coming, giving the time she will arrive and asking in advance if there are any materials or particular helps that the supervisor should bring to the school. In other words, an attempt is being made today to take supervision off the plane of snooping and sneaking and listening and eavesdropping, and put it on a plane that is open and above-board, with the supervisor understanding that she is to be a helper of teachers and not a rater for salary schedules.

What Supervisors Should Do. A number of lists of supervisory activities have been suggested. Miss Hattie S. Parrott,¹ an assistant supervisor of rural schools, has suggested the following as the main purposes of supervision: (1) to increase both the quality and quantity of classroom instruction, (2) to promote oneness of purpose and unity of effort among all the teachers and principals in the county-wide system, (3) to make the county school more responsive to the physical, social, and recreational needs of the pupils, (4) to make the large consolidated rural school more systematically responsive to the social, recreational, intellectual, and economical lives of the community.

A more extensive and carefully subdivided list of activities of the supervisor has been compiled by H. D. Fillers in the *American School Board Journal*.² His list is in substance as follows:

¹ Parrott, Hattie S., "Rural School Supervision from the Viewpoint of the Supervisor of Rural Schools," *Educational Administration and Supervision*, March 1926, page 187.

² Fillers, H. D., "Supervision," *American School Board Journal*, February 1927, page 44.

1. "Help the teachers in the interpretation of the courses of study." One might add here also that the supervisor is to help the teacher in the construction of the courses of study. More and more are teachers being considered a vital group in the making and interpreting of the course of study, and helping them in this work should be considered one of the major jobs of the supervisor.

2. "Demonstrate classroom teaching of the desired type." One of the very important functions of the supervisor is to demonstrate to the teacher high grade teaching. This permits the teacher to observe and will be of considerable aid in showing her what her weaknesses are and how to remedy them. It should go without saying that no supervisor should undertake to demonstrate teaching before the teacher unless the supervisor had made careful preparation and study of the lesson which she is presenting.

3. "Hold individual and group conferences for the purpose of improving the efficiency of instruction." This also is an important part of the supervisor's work. Much depends on the conferences. If in this period personalities are discussed, it will probably do more harm than good.

4. "Make specific, constructive suggestions—book references, periodical articles, etc., so that the teacher may see and know what to do, what to expect and what attainment may result."

5. "Give tests and compare results with standard norms." Standards and norms are rather carefully worked out today for a number of school subjects. Many teachers, not knowing this, have no way of estimating the work of their pupils. Therefore, when the supervisor compares the achievement of a certain classroom with the standard norms, it will almost always prove an incentive to the teacher to do better work, whether the achievement of her pupils be above or below the norms.

6. "Rate the work of teachers from the point of view of pupil achievement." It is important to keep in mind here that the rating the supervisor does is from the point of view of the

pupil. Ratings may be used for administrative purposes or for instructional purposes. It is generally agreed by authorities in supervision that supervisors should not rate teachers for the purposes of administration, but that they should be quite free in rating for the improvement of instruction.

7. "Set up standards of classroom attention, encouraging the attainment of the goal by getting every pupil to focus as a group unit." Not enough work has been done by the supervisor in this line. Definite standards or norms as measures of attention are not well established yet. Some work has been done in this field whereby the supervisor estimates the number of pupils giving attention every minute by counting the number of pupils in the class who are actually or apparently listening to the discussion. The supervisor then finds the percentage of minutes of attention by dividing the total number of pupil-minutes in the recitation by the number of minutes of attention. Such methods of measuring attention, however, are not very widely used at the present time.

8. "Outline, with the aid of teachers, the units to be taught in each half grade." A supervisor can render valuable information here, especially to the beginning and inexperienced teacher. More work ought to be done in dividing the curriculum into teaching units. The supervisor is in the best position to help the teacher do this and also to suggest references that have a bearing on each unit.

9. "Encourage the use of some teaching devices—blackboards, pictures, illustrative materials, etc." One may define a teaching device as anything the teacher uses in her teaching. Most teachers do not make enough use of common devices like these mentioned here. The efficiency of a teaching unit can frequently be increased fifty per cent if the teacher makes the proper use of the blackboard.

10. "Judge the success of the teachers by standards that are impersonal, objective, uniform and fair." As a general rule the objections in the past to rating teachers have been that the measuring stick was not impersonal and was not objective and

often used unfairly. There is abundant reason for rating teachers. The cry is sometimes raised that other professions are not rated, such as law and medicine, but when one stops to think he will realize that both of these professions have a very rigid rating applied by the public. As to the charge that rating is unfair and unscrupulous, the reply can truly be made that it is much more difficult for a teacher to be unfairly treated when a rating scale is used than when the rating scale is not used. Any type of bookkeeping or procedure that forces the superintendent to put his estimate down on the record will tend to prevent politics and unfairness from operating in the rating of teachers.

11. "Be a help to teachers rather than an inspector." It has already been pointed out in this chapter that an inspector checks on the mechanical things about the school. The supervisor, on the other hand, takes the teacher into her confidence, finds out her difficulties, her problems, and attitudes, and makes constructive suggestions for her betterment. The supervisor will do demonstration teaching, but the inspector never does. The supervisor works on the course of study, tests and measures the achievements of pupils. The inspector is not interested in this service.

12. "Aim to develop in the teachers the habits of self-analysis and self-criticism." It is a fine thing for a supervisor to point out to a teacher her weaknesses, her bad habits, and to suggest remedies. It is an infinitely better thing to cultivate in the teacher the attitude of analyzing her own weaknesses and a desire for remedying them.

13. "Assist in setting up definite goals of achievement for the different grade levels." Goals so carefully worked out that the teacher goes before her class at each recitation with definite objectives to be gained are a great incentive both for the teacher and for the pupils. It is not an easy matter, however, to set up these goals. Beginning teachers particularly will be in doubt as to what should be accomplished in each recitation. The supervisor will render a great service in this capacity.

14. "Coöperate with the building principals in all activities."

15. "Encourage professional growth and advancement of teachers." One of the real measures of a supervisor's work is the extent to which she has brought about professional growth in her teaching corps.

16. "Be helpful by being fair and considerate as well as by being efficient." Manifestly a supervisor can be helpful to a teacher because she is efficient, but she can be of still greater help by being efficient in a way that will make the teacher feel that her supervisor is absolutely fair and gives her the utmost consideration and respect.

Essential Points in a Supervisory Program. If one were appointed supervisor of a certain school unit, he would be face to face with a problem of organizing the work. In such a situation one of the first steps to be taken would be to initiate a definite plan. This would probably mean making a careful survey to see what the situation was. After the survey, including testing and analysis, has been made, definite objectives should be set up. For example, if the survey should show that the children are below normal in spelling, or are reading too slowly, or are not up to the norm in comprehension, any of these could be made a first goal. In any attempt to supervise, however, one should be careful not to undertake too great an objective at the beginning. Suppose the first objective to be the improvement of the reading rate. This in itself is such a broad goal that it must be still more carefully analyzed. For instance, one should ask why the reading rate is below the norm. In answering this he would undoubtedly give diagnostic tests in order to discover the weakness. This might reveal that the material which the children read was graded too low and that similar easier material should be substituted. A diagnosis might reveal that the children are peculiarly weak in word recognition or enunciation or that they have developed habits of inserting extra words. Whatever it be, before one is in a position to undertake to correct the weakness, he must survey, analyze, and

diagnose. This ought to be the first step in a supervisory program.

In the second place, the supervisor should undertake an active analysis of the teacher's work. For example, what does the teacher do in a class recitation? It may be found that she does all the talking and that pupils are listless. It may be found that the teacher asks too many questions of the wrong type. Systematic reports of work done in recitations often indicate that a teacher asks as many as three or four questions per minute. This means, of course, that no pupil can do much thinking in the classroom. He has not time to think about one stimulus before another is given. Fortunately, there are a number of articles on the teacher's questions and anyone interested at present can find valuable suggestions about the number, kind, and type of questions to be asked. It is quite conceivable that the wrong kind, as well as the too frequent questioning by the teacher, can bring complete negative responses from the children. For example, in a third grade hygiene class the teacher asked a pupil this question, "What would you do with a person who had become asphyxiated with carbon dioxide?" Now, of course very few third grade pupils would know the meaning of the words in this question, and the negative answer from the pupil would not necessarily mean that he did not have the information which the teacher called for but that he did not understand the language in which the question was couched. In making an analysis of the work of the teacher and the conditions of the classroom, the supervisor ought to have an age grade and age progress table in order to know what per cent of the class was retarded, what per cent accelerated, and what per cent on time. This would give the supervisor considerable information about the success of the teacher's work, provided this teacher had been teaching the same group of pupils. It would also tell the supervisor something of the individual differences existing between the members of the class, and would be worth much to her in suggesting a change in materials and content.

The third thing that supervisors should strive to do in a supervisory program is to build in the teacher a desire to help herself to improve. To do this the supervisor must be tactful in her dealings with the teacher. The supervisor should make herself inconspicuous in the conferences. The supervisor ought to recognize the importance of conferences, with beginning teachers especially. She ought to hold a conference with the teacher before the teacher teaches the recitation, if possible. Another conference might be held immediately following the teaching and then at some later time a follow-up conference should be held. While visiting the teacher and supervising the recitation, the supervisor should keep herself in the background as much as possible. She ought to enter the room quietly, take a seat somewhere in the rear of the room, and leave the room as quietly as possible. Authorities disagree as to whether the supervisor should take notes while in the room. If the notes taken are on commendable features of the work as well as those features where help is needed, and the teacher understands this, there is less danger of making the teacher nervous by note-taking. Most supervisors need to keep memoranda of the points on the classroom work in order that they may be most helpful.

In the fourth place, the supervisor should have suggestions for devices and helps that will make the teacher realize the importance of reading widely and keeping up with current educational practices. A teacher may have taught Latin a number of years and inspired little joy in the hearts of the pupils who take her subject. The same teacher may revolutionize completely the attitude of the pupils in studying Latin if, instead of the old, hard, grinding way of drilling, she substitutes a game of authors with each card showing a Latin word to be declined or to be conjugated. Then when the Latin class is called, the children really enter into it with a spirit of play. If a certain pupil calls for a card which another pupil has, the rules can be such that the holder of the card will not have to give it up unless the caller can conjugate the verb, decline the noun, or whatever it may be. Spelling can be transformed from

drudgery into a spirit of play through similar devices. The multiplication table is a dull, lifeless thing when studied from a book. When combinations are given in the bean-bag game, however, it is quite different. A supervisor who is able to suggest excellent devices to teachers and show them how their work can be improved thereby will do much toward building in the teacher a desire to improve and read.

In the fifth place, a supervisor has an excellent opportunity for building a new attitude toward teachers' meetings. Much has been said about teachers' meetings, but whatever may be said about them, they can be made a vitalizing teacher improvement activity. To be so, it is essential that supervisors bear in mind that participation in activity is a human want and teachers should be permitted to talk, to ask questions, to watch demonstration teaching, and to see demonstration lessons taught. More than once teachers have emerged from a teachers' meeting with the comment of "Oh, what a bore. I thought I would die before it was finished." Something is radically wrong with teachers' meetings when they are so conducted. If teachers' meetings are conducted so that definite educational problems will be discussed and so that various committees, such as research committees and special study committees, make their reports, there should not be such comments on the educational agency we call the teachers' meeting. Nor will there be when they are used to their maximum advantage.

The Value of Supervision. The problem of the value of supervision is easily the most vital one raised in this chapter. In the minds of many people, including teachers, supervision is so much lost work, and money spent for it is thrown away. Fortunately, a number of excellent demonstrations and experiments have been performed wherein the value of supervision has been measured rather accurately. Any experiment whose chief purpose is the measuring of supervision has the same difficulties to encounter that most educational experiments have, namely, how to control all the factors save the one that is being measured. Usually this is done by setting up a control group and

an experimental group. In the experimental group supervision is utilized and in the control group no supervision is given. If the two groups are equated in every respect and tested at the beginning of the experiment and again at the close, the differences in the amounts of improvement in the two groups must be due to supervision. Among the demonstrations and experiments that have been made in an attempt to answer the question of what the value of supervision is, the following may be mentioned:

The zone plan of supervision. One of the early demonstrations in this field was that made by M. S. Pittman.¹ The scheme he used is usually known as the Zone Plan of Supervision. According to the author, a plan of supervision in which the supervisor divides his entire supervisory district into territorial units, each of which serves as the territorial limit for one week of supervisory effort, has been designated as the Zone Plan.

Pittman conducted an experiment in Brown County, South Dakota, to test the value of school supervision. He did this by taking two equal groups and comparing the educational progress made by the children during one school year. He supervised one of the groups but left unsupervised the other group. The standings of the children were measured at the beginning of the year and at the end of the year. As a result of the comparisons thus made, he was able to determine the value of supervision. Among the results which Pittman found may be mentioned the following:

1. In the group which was supervised, 194 per cent as much advancement was made in seven months as in the group that was unsupervised.

2. The author estimates from this that one supervisor supervising as many as forty-five schoolrooms would produce an educational value of approximately \$45,102.

3. The teachers who were supervised did approximately four times as much professional reading as they had done prior to supervision, and four times as much as a group of teachers with whom they were compared.

¹ Pittman, M. S., *The Value of School Supervision*, Warwick and York, 1921, pages 19-20.

4. The average attendance in the supervised group in terms of enrollment was seventy-six per cent and in the unsupervised group 70.7 per cent.

5. The greatest gains in supervision were made in the lower grades.

6. Supervision served to keep in school children who were in the seventh and eighth grades. Ninety-two per cent of the children in the seventh and eighth grades of the supervised schools continued in school to the end of the year, but in the unsupervised schools only sixty-nine per cent completed the school year. From these findings and others the author of this experiment is quite convinced that supervision pays well.

*The Courtis experiment.*¹ In September 1919, Dr. Courtis gave 25,000 pupils in grades four, five, and six, in Detroit, certain geography tests. He then divided these pupils into four groups—an unsupervised group, an inspected group, a group supervised by schools, and a group supervised by grades. No supervisors visited the unsupervised group, only occasionally did they visit the inspected group, in the third group some aid was given, while in the fourth group the supervisor did all she could to improve instruction. At the end of six weeks the groups were retested. Among the findings which Dr. Courtis states were these: In the unsupervised group the teacher succeeded in making 49.5 per cent of the desired gain; the inspected group made fifty-four per cent of the desired gain; the supervision by schools group made sixty-eight per cent of the desired gain; supervision by grades 69.5 per cent. This seems to show a distinct favorable gain of supervision over no supervision.

The Indiana demonstration. In 1924 the General Education Board conducted a supervisory demonstration in four counties in Indiana, in order to estimate the worth of supervision. In all of these counties the children were tested in the fall and again in the spring. At the beginning of the year in two of the counties two special supervisors were brought in to see how much they could improve the instruction. In the other two counties no supervision was given. Consequently, at the end of the year, after the second test, it was believed that the dif-

¹ Courtis, S.A., "Measuring the Effects of Supervision," *School and Society*, Volume 10, pages 61-70.

ference in results was a measure of the value of supervision. The conclusions from this experiment are stated briefly as follows: ¹ "While there were variations in the results achieved in grade to grade, school to school, and county to county, on the average the children in the counties with supervisors advanced, during the periods between the two tests, 14.3 per cent faster than the children in the counties without supervisors. On the basis of the same difference in progress for the entire year of 160 days, the two counties with supervisors accomplished the equivalent of 182.9 days of school work; that is, the children in the two counties with supervisors actually received during the regular school year of 160 days the equivalent of 22.9 days of instruction more than they would have received had there been no supervisors. Or to put it in other terms, the two counties with supervisors, for an educational expenditure of \$14,021.24 for supervision provided the equivalent of 22.9 days of instruction for their children, which at the current daily cost in instruction without supervision has a value of \$38,559.48. But this is not the real value of supervision; its real value is to be found in the better education obtained by rural children within the time they have at their disposal."

That results other than financial accrued from this demonstration may be seen by the testimony of one of the county superintendents in one of the counties where the supervisors worked. Writing in the September issue of the *Journal of Rural Education*, 1925, Miss Hilda Hughes, county superintendent of one of the supervised counties, says that among the advances gained in supervision are the following: (1) Supervision has freed our minds of the habit of blaming the child for poor progress. (2) The supervisors taught us how to use books to advantage. (3) Supervisors taught us to change our former procedure in primary reading. We used to read just one primer, and now we read eight or more. (4) One of the major things supervision taught us was to correlate. Geography has been greatly

¹ "Preliminary Report on Supervision in County Demonstrations," *Education Bulletin*, Number 74, Indianapolis, Indiana, pages 21-24.

improved and used to solve the reading problem. (5) In arithmetic the supervisors taught us the value of the practice tests and flash cards and many special methods for teaching the combinations. (6) The supervisors have taught us the value of supplementary materials.

Miss Hughes also mentions greater civic pride, better observation of health habits, greater courtesy, greater accuracy in thinking, greater ability to reason, greater interest in school, and better results in the fundamental school subjects, as some of the results of supervision.

The Michigan experiment. In 1924 a demonstration in supervision was tried in two counties of Michigan, under the guidance and direction of the rural education committee of the Michigan State Teachers Association.¹ In this experiment thirty-five one-teacher schools and eight rooms of two-teacher schools in each of two counties were used. The schools were paired against each other and tests were given at the beginning of the year and also at the end of the year. In one of the pairs of schools supervision was conducted and in the other pair no supervision was given. As nearly as possible the groups were equated in intelligence of children, in sex, in grades, and in qualifications of the teachers. The following summary of percentage of the normal year of school work achieved in the two groups shows the effect of supervision.

	SUPERVISED GROUP	UNSUPERVISED GROUP
Reading.....	132	43
Addition.....	191	126
Subtraction.....	195	162
Multiplication.....	176	139
Division.....	156	94
Arithmetic reasoning.....	148	100
Correct answers.....	180	108
Language.....	188	22
Spelling.....	183	50
Average.....	172.7	93.7

¹ Hopps, W. C., "The Value of Supervision in Rural Schools," *Journal of Rural Education*, Volume 5, Numbers 7 and 8, page 289.

From the preceding data it will be seen that in the supervised schools, in the nine subjects tested, the children on an average accomplished 172.7 per cent of a normal year of school work while the pupils in the unsupervised groups accomplished only 93.7 per cent of it; that is, the achievement of supervised pupils was 79 per cent greater than the achievement of the unsupervised pupils.

A language experiment in supervision. Under the direction of Professor C. A. Phillips, the University Elementary School of the University of Missouri attempted to measure the effect of supervision in oral and written language with sixth grade pupils.¹ In this experiment a class of fourteen sixth grade pupils was secured for a supervisory study in the teaching of oral and written language. The pupils were unselected and not above the average in ability. The experiment was conducted for twenty school days and the length of the grade's period was twenty minutes. The teaching was done by a regular classroom teacher under the supervision of a language supervisor. Children were tested at the beginning of the experiment and at the close of the experiment with two forms of Charter's diagnostic language tests.

The amount of gain made in the four weeks time may be quoted as follows: the class median on the initial verb test was 29.5 and on the final verb test 35.3; on the initial pronoun test 19 and on the final pronoun test 37.2; on the initial A test 16, final A test 35; and on the initial B test 30.5 and on the final B test 37.5. This shows a significant gain for only four weeks time.

From the experiments that have been made in an attempt to measure supervision it appears that there can be no doubt of the value of supervision in the saving of dollars. Moreover, one should bear in mind that probably the class results of supervision are those intangible outcomes that are not so easily estimated as the saving in money.

¹ Crouch, Roy A., *Educational Administration and Supervision*, January 1926, page 49.

Principles of Supervision. Many authorities in supervision have suggested principles on which the supervisory program should be based. These lists vary all the way from a few principles to many. The following are suggested here as the basic principles on which supervision should be based:

Supervision a coöperative enterprise. It must be recognized that supervision is a coöperative enterprise. The real value of supervision will not be realized unless the proper attitude of pulling together exists between the teacher and the supervisor. This means that both must be in the attitude of giving and taking, that personalities must be put aside, and that selfish, petty jealousies cannot exist. A sympathetic, wholesome respect for the teacher on the part of the supervisor is essential. No supervisor can hope to succeed who holds the mental reservation that she belongs on a pedestal above the teacher; and certainly she will not succeed if the teacher holds the same idea towards the supervisor.

Based on a definite understanding. For supervision to succeed, the supervisor and the teacher must have definite understandings on certain educational issues. They ought to agree on what the aims and principles of a curriculum are, what place the curriculum holds in educational progress, and the extent to which it will meet life situations. They should agree on child psychology; they should agree on the extent to which they will give satisfaction to the instincts and the emotional make-up of the child. They must agree on the importance of educational tests and the various measuring rods for estimating achievement. It is evident that if a teacher has no faith in educational tests, does not believe that they measure what they claim to measure, she will take issue with the supervisor who undertakes to estimate her work on that basis. Teachers and supervisors should agree on the place of devices in teaching. Through the teaching devices the whole question of internal and external interests is likely to arise. The supervisor and teacher will soon be at cross purposes, for example, if the teacher believes in giving spelling stars in spelling and the super-

visor looks upon this as an artificial, unsatisfactory means of getting work done. In other words, supervision must rest on definite understandings between teacher and principal, and the more points on which they agree, the more smoothly a supervisory program is likely to progress.

A third principle of supervision is the principle of growth. It ought to be the aim of every supervisor to measure her work by the growth of the teacher and the growth of the pupils under her supervision. A supervisor who keeps this in mind will not permit a teacher to be a slave to a plan. She will be continually on the lookout for a chance to develop initiative in the teacher and to inspire her to do more reading and to have greater vision in the whole teaching profession. One of the great weaknesses in many teachers is the failure to realize the importance of relative values. They tend to stress minor things just as strongly as major things. In such a situation the supervisor will have a fine opportunity to develop growth in a teacher. The supervisor will know the important events in history and will be able tactfully to direct her attention to these major values, as well as get her to see that other items are of minor importance. To develop growth in the teacher the supervisor must always respect the personality and ego of a teacher. In a number of ways the supervisor can do this. The question, when should the supervisor take the class from the teacher and proceed with the recitation, has often been asked. Such instances should occur so rarely that about once in a lifetime would be enough for any supervisor. It is more important that the supervisor save the personality of the teacher and preserve the respect which pupils have for her than it is to embarrass the teacher by taking a class because of some error committed by the teacher. The extent to which the supervisor is developing growth in the teacher can be measured by the increased interest upon the part of pupils. As pupils grow in interest and their number increases in ability to give attention, so may the supervisor feel that the teacher is growing. Any kind of growth in the teacher means liberation, so that it ought to be the desire of the supervisor

to liberate the teacher from blindly following suggestions which the supervisor makes.

The fourth principle is that supervision will be judged by the improvement it makes in teaching. The teaching process may be thought of as a three-cornered affair—the teacher, the pupil, and the experience which the pupil is trying to get. It is the teacher's business to help the pupil get this bit of experience, and it is the supervisor's business to help the teacher do this better. Any activities which the supervisor performs that tend to help the teacher do her job better may be called supervisory activities. All activities that do not help the teacher to teach better are not supervisory activities, hence it can be truly said that the measure of the worth of the supervisor is the extent to which she improves teaching.

QUESTIONS AND EXERCISES

1. What supervisory duties are usually assigned to the superintendent? The principal?
2. When the music supervisor is teaching a class should she be responsible for the conduct of the class or should this responsibility be left to the regular teacher of the class?
3. Make a list of all the duties you think a supervisor should perform. Do you think she should rate the teachers? Should a superintendent transfer a teacher to another position if the supervisor recommends it?
4. What do you understand to be the chief difference between inspection and supervision? Does a principal usually supervise or inspect?
5. Give several suggestions as to how the supervisor might make her criticisms more effective to the teachers?
6. Make a list of ten things that a supervisor should not do.
7. Should a supervisor be rated? Who should do it?
8. Would you object to your supervisor's taking notes while visiting your class? Why?
9. What are some of the things that should be discussed by the supervisor and teacher in the pre-teaching conference? What should be the chief purposes of the follow-up conference?
10. Suppose the fifteen teachers in a certain community are just about average in qualifications and the salaries of the teachers are just about average. The superintendent has \$3,000 which he can use to increase the teacher's salaries or he can use it to hire a supervisor. Which would be the better thing to do in so far as the improvement of teaching is concerned?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

PART IV

RECENT DEVELOPMENTS IN EDUCATION

CHAPTER XVI

HEALTH EDUCATION

In recent years the public generally has realized that much of the physical illness of the human race is preventable. It has been estimated by the most conservative authorities that the annual cost of sickness, medicine, doctors' bills, and loss of wages due to illness in the United States exceeds the total annual cost of public education. It is difficult to evaluate accurately the economic loss to the nation due to ill health. Whatever the cost may be, we know that it is altogether too large; but the economic loss is not the only thing. The large amount of mental and physical suffering that comes from preventable diseases could be greatly reduced with proper health education.

Recently medical science has been focusing its attention upon prevention rather than cure. That the span of human life has been greatly increased because of better health habits is a well-known fact. We are told that the average span of human life in the Middle Ages was twenty-one years; in the eighteenth century it was twenty-five years; in 1825, thirty years; in 1850, forty years; in 1900, forty-six years; in 1920, fifty-five years; and in 1930, sixty years. It is the opinion of many health specialists that with the further applications of science to health the span of human life may be extended to eighty years. This extension of life expectancy is the result of a new emphasis in education—the health of the individual.

History and Growth of the Movement. Medical inspection, which has in most instances been the forerunner of health education, has been practiced on the continent of Europe much more generally and for a much longer period than in the United States

of America. The work was begun in France as early as 1833 when the law in that country charged the school communities with keeping schoolhouses clean. In 1842 the law ordered that public schools for boys and girls should be visited by a physician to inspect the health of the pupils.¹ The work spread rapidly in France and in 1879 an appropriation was passed for its support.

As early as 1863 Sweden required that physicians make physical examination of children a preliminary to participation in gymnastic exercises.

Dr. Charles H. Keene in his volume *The Physical Welfare of the School Child* states that, "the first system even approximating our modern idea was set up in Brussels in 1874. It was soon copied in Antwerp, Louvaine, and Liège, and became the model upon which the school medical inspection in Switzerland was founded." ²

Health work was begun in Germany in 1867 and before 1900 practically every country on the continent of Europe had established a program of health education.

In the United States, "the first regularly established scheme of medical inspection of schools was inaugurated in Boston in 1894 when the city was divided into fifty medical-inspection districts, and fifty physicians were appointed to carry on the work." ³ Chicago, New York City, and Philadelphia established programs for medical inspection before 1900. "The first state legislation, however, was that passed by Connecticut in 1889, which made provision for testing the eyesight of all pupils in the public schools." ⁴ The responsibility for this work was placed on the superintendents, principals, and teachers. Other states became interested and soon after 1900 a number of states passed laws making permissive or mandatory the employment of physicians as medical inspectors in schools. As

¹ Keene, Charles H., *The Physical Welfare of the School Child*, Houghton Mifflin Company, 1929, page 82.

² *Ibid.*, page 82.

³ *Ibid.*, page 84.

⁴ *Ibid.*, page 85.

early as 1915, "twenty-six states had some form of legislation regarding school-health supervision, and by 1923 this number had increased to thirty-nine."¹ The early laws were inadequate and frequently were only permissive. Most of these laws have been revised and most states today have broadened their scope from medical inspection to more or less adequate programs of school-health supervision. The cities of the nation have taken hold of the problem in a more helpful and more intelligent way than the rural areas. There are large numbers of counties in the nation today that employ county health officers, but there are still great areas of the nation where no program of health supervision has been planned for the rural districts.

The Administration of Health Education. As may be seen from the preceding paragraphs, medical inspection was of primary importance in the early years of health education. It was soon evident to persons interested in this field that this was but the beginning of the movement, and that the medical profession could not hope to cope with the problem alone. The schools were first asked to assume a large part of the responsibility for the health program, and after a time were given sole responsibility for the administration of the work. This added responsibility to the school program involved administration adjustments and in many cases additional personnel.

The kind and amount of health supervision found in school systems today depend upon the interest in the program and the size of the school system. In school systems that are large enough to afford it, there should be a full-time director, supervisor, or counselor who will be charged with the responsibility of all health activities in the school program. If the system is not large enough or cannot financially afford to employ a full-time health officer, a part-time person may be employed. If it is not possible to employ a part-time person, the work should be carried on by the teachers in coöperation with voluntary workers from the medical and dental professions.

¹ *Ibid.*, page 85.

Objectives of Health Education. The general objectives of health education have been stated clearly and concisely in a bulletin published by the Health Education Department of the city schools of Rochester, New York. They are:

1. To conserve and improve physical fitness for life activities through a program of exercise, rest, and nutrition.
2. To develop right attitudes and ideals relating to all phases of individual and community health.
3. To make desirable health habits automatic through emphasis and practice.
4. To seek correlations with other fields of school activity in the interests of child health.

A joint committee of the National Education Association and the American Medical Association set up the objectives of the school health program as follows:

To instruct children and youth so that they may conserve and improve their own health.

To establish in them the habits and principles of living which throughout their school life, and in later years, will assure that abundant vigor and vitality which provide the basis for the greatest possible happiness and service in personal, family, and community life.

To influence parents and other adults, through the health education program for children, to better habits and attitudes so that the school may become an effective agency for the promotion of the social aspects of health education in the family and community as well as in the school itself.

To improve the individual and community life of the future; to insure a better second generation, and a still better third generation; a healthier and fitter nation and race.

The health education program in any community should be based on the above objectives and should cover three phases: health protection, health teaching, and health development. The Rochester city schools have a carefully outlined program covering these three topics that is sufficiently condensed to warrant incorporation in this volume. Between pages 380 and 381 will be found the three-section program for the elementary, junior high, and senior high schools, and a chart showing the organization for the administration of the program.

HEALTH

An Educational Objective Developed through a
Three Section Program
Elementary—Junior High School—Senior High School

Health Protection	Health Teaching	Health Development
Objectives <ol style="list-style-type: none"> 1. To detect physical defects for the purpose of correcting remediable conditions. 2. To prevent and control communicable disease. 3. To recommend such school equipment and practices as will furnish the best possible environment for the health of the pupils and teachers. 4. To secure the co-operation of the home in health protection activities. 	Objectives <ol style="list-style-type: none"> 1. To develop right attitudes and high ideals toward health and health practices in life situations. 2. To give students information which will help them to improve and conserve their own health. 3. To aid in establishing specific health habits. 4. To co-operate with parents and others in contributing to the health of the community. 	Objectives <ol style="list-style-type: none"> 1. Physical — To develop organic power, vitality, posture and neuromuscular skills for meeting life situations. 2. Social — To develop traits of citizenship such as courage, initiative, perseverance, co-operation, loyalty, honesty, justice, and courtesy. 3. Cultural — a. To gain a sympathetic understanding and appreciation of physical laws, rhythm, and achievement. b. To develop interest and specific skills in such activities as will be of value in leisure time.
Activities <ol style="list-style-type: none"> 1. Medical Service. <ol style="list-style-type: none"> a. Medical Inspection (Health Bur.) <ol style="list-style-type: none"> 1. Pre-school child. 2. School child. b. Nursing Service (Health Bureau) c. Dental Service (Dispensary). 2. Morning Health Inspection. 3. Physical Examinations. <ol style="list-style-type: none"> a. Routine physical examinations and tests to determine physical fitness. b. Tests for sight, hearing and speech. (Special Class Department). c. Tests for determining underweights and overweights. 4. School Sanitation. <ol style="list-style-type: none"> a. Standards of heat, light, ventilation, and cleanliness. b. Proper seating, drinking fountains, toilet facilities. 5. Hygienic Arrangement of School Program. <ol style="list-style-type: none"> a. Alternation of subjects. b. Extra-curricular activities. 6. Mid-morning Lunch. 7. Lunch Room Service. 8. Accident Prevention. 9. Teacher Health Service. 	Activities <ol style="list-style-type: none"> 1. Instruction in Hygiene and Physiology. 2. Health Talks by Special Health Education Teachers to Motivate General Health Program. 3. Coordination and Correlation with Other Subjects in the Curriculum. 4. Individual Conferences. <ol style="list-style-type: none"> a. Pupils b. Parents. 5. Health Campaigns and Special Emphasis Weeks. 6. Assembly Programs and Class Meetings. 7. Special Demonstrations, Exhibits. 8. Classroom Projects. 9. Accident Prevention. 10. First Aid. 	Activities <ol style="list-style-type: none"> 1. Relaxation: <ol style="list-style-type: none"> a. Games b. Informal Exercises c. Rest 2. Programs in Large Muscle Activities for Physically Normal Pupils. <ol style="list-style-type: none"> a. Gymnasium exercises. b. Swimming instruction. c. After-school athletics and recreation. 3. Programs in Leadership—Development for the Physically Super-Normal Pupils. <ol style="list-style-type: none"> a. Through gymnasium and recreation classes. b. Through special training. 4. Special Classes for Physically Handicapped Pupils. <ol style="list-style-type: none"> a. Nutrition. b. Open air. c. Orthopedic. d. Better health. e. Hard of hearing. f. Sight saving. g. Speech correction. (Special Class Dept.)

HEALTH COUNSELOR

1. Acts as executive secretary for the Health Council of the school.
2. Represents the Council in co-ordinating the various aspects of the work of each department in the school that contributes to health.

HEALTH COUNCIL

CHAIRMAN—PRINCIPAL OF SCHOOL

PERSONNEL

ELEMENTARY SCHOOLS

PHYSICIAN	NURSE	HEALTH TEACHERS	HOME ECONOMICS TEACHER	VISITING TEACHER	REPRESENTATIVE CLASS ROOM TEACHERS
SECONDARY SCHOOLS					
PHYSICIAN	NURSE	HEALTH TEACHERS	DRAMATICS TEACHER	COMMERCIAL TEACHER	FOREIGN LANGUAGE TEACHER
GIRLS' ADVISER	BOYS' ADVISER	PSYCHOLOGIST	HOME ECONOMICS TEACHER	SOCIAL STUDIES TEACHER	MATHEMATICS TEACHER
JANITOR	SCIENCE TEACHER	ENGLISH TEACHER	ART TEACHER	VOCATIONAL TEACHER	LUNCH ROOM DIRECTOR

FUNCTIONS OF THE HEALTH COUNCIL

- | | | | | |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| A. To create interest in the school health work by securing active co-operation of the faculty and students. | B. To centralize the organization and administration of the school health program. | C. To determine all available resources in the school that could contribute to a well developed health education program. | D. To co-ordinate these resources so that they may be used in the most effective manner, thus making it possible for each department to function in a broader way. | E. To act as a clearing house for all school and community health problems. |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|

It is the responsibility of the officer in charge of the program to plan the work so that every teacher will be stimulated to her best efforts to the end that every child will receive proper instruction and may practice right habits of living. Every school system, whether rural or urban, should have a program of health instruction and health habit formation that will carry through the year. The general plan of organization and administration of the health program in Birmingham as worked out by Dr. James S. McLester, Director of the Department of Child Health, and as given in *Health Bulletin* for September 1930, is quoted below:

The general plan of the work for the year includes four phases:

1. Bulletin to be issued from the Superintendent's office each month taking up definite health topics. These topics are arranged from the course of study, are based upon the needs of the children, and make for unity in the work.

2. Morning inspection in each roll call room. This is very important. Its aim is to insure neatness and cleanliness and to give the teacher an opportunity to detect unusual symptoms.

3. Health Day in auditorium. Arrange to meet the schedule of the supervising health teachers and not to conflict with other supervisors. The programs are to be based on the topic for the month and should be carefully planned and well presented. Some physiology in connection with each topic will be given.

4. Correlation of Health Teaching with all curricular subjects.

The auditorium teachers have found that the Health and Citizenship Clubs, the Junior Board of Health, and the Health Crusades are most effective methods by which to teach health, but the Health Promoting Association with its various committees gives more children an opportunity to take part in the program. The plan for this organization is found on page 422 of "Our Health Habits," now in each school. It is also suggested that a round table discussion follow each program.

Primary teachers have found the Junior Health Crusade very attractive for morning inspection and health teaching. The Morning Inspection Wheel is another attractive device but many teachers have originated plans of their own. The 4th, 5th, and 6th grades may use the Modern Health Crusade, an excellent device for morning inspection and health teaching, and for checking all the practice of health habits.

All home room teachers are requested to allow the children to write at least one composition each month on health, conforming to the current topic. This is a splendid way to acquire health knowledge. The material may be presented as a program in the auditorium.

Play ground teachers are urged to help detect and correct faulty posture and arrange less strenuous games for the underweight.

The art teachers are consulted about any health posters and cover designs for booklets, and their aid should be enlisted in forming poster committees from the best art pupils.

The life processes of plants and animals and their need of water, air, sunlight and food presents an excellent opportunity for experimental teaching through nature study.

The use of leisure time could not be more wisely spent than in taking part in the many splendid outdoor activities that are so important in building healthy bodies.

The effect of the school room condition on health should always be kept in mind. A good health teacher will see that the room is properly ventilated at all times, that is, at the best temperature 68 degrees to 70 degrees F., that the light falls at just the right angle for the child's eyes, that the seats are properly adjusted to insure good posture and that the aisles and desks are clear. The teacher from whose room the child leaves for lunch should make an opportunity for the child to wash his hands before eating. This was carried out last year by many teachers with minimum loss of time. The lunch room is an excellent device to teach food selection.

The most important element in health training is that the pupil possess knowledge of the facts of healthy living and express these facts in the formation of the habits of healthy living. Yet the Department of Child Health feels that the time has now come to include in the health teaching more information as to the physiologic bases for these habits. Consequently the effort will be made during the year to conform the monthly bulletins to this effect. As each topic is presented concrete suggestions will be given to the teachers in order that the physiology and hygiene related to the topic may be better understood by the pupils. This will demand increased interest on the part of the teachers but the added impetus given to the child's study will be ample reward. Here will be given an opportunity for wider knowledge that may even be reflected in the achievement tests.

The "Crusade System" mentioned above originated in 1920 and was popular in the decade following the date of its origin. It is not so popular with health teachers today but is still widely used in the nation.

Dr. McLester worked out a series of health bulletins for the entire year. In October the bulletin dealt with nutrition; in November, with sleep, rest, exercise, and posture; in December, with oral hygiene and the hygiene of the eye and ear; in January, with temperance, sunshine, air, and water; in February, with protection of the body; and in March with cleanliness. Each month a bulletin was mimeographed and sent from his office to the teachers in the public schools to assist them in planning their programs of work through the year, and each month a different subject was emphasized in the program. The section of the bulletin for December dealing with oral hygiene is reprinted in full here as an illustration of the type of material sent out through the office of the director of health education in that city.

Birmingham Public Schools Health Program

December, 1930

ORAL HYGIENE AND THE HYGIENE OF THE EYE AND EAR

The Report of the Joint Committee on Health Problems in Education states that percentage of dental defects among the school children of America is from fifty to ninety-eight.

Dr. E. V. McCollum after completing a world-wide study of the teeth says, "There is nothing in our national life so pressing for attention and more important from a standpoint of public health than proper care of the teeth."

This month we wish to stress the care of the teeth, emphasizing the following points:

1. *Cleanliness.* The insanitary condition of the mouth and teeth presents an ideal medium for the development of germs. Lack of cleanliness causes decay of the teeth. Decayed teeth cause faulty mastication which interferes with nutrition, lowers vitality and breaks down resistance.

2. *Dental care.* A visit should be made to the dentist twice a year. The dentist, like the Chinese doctor, prefers to keep his patients well rather than treat them when sick. The dentist can remove tartar and stain from the teeth and discover small cavities, which if uncared for would result in large cavities and eventually in the loss of a tooth.

3. *Proper food.* Foods for building teeth are the foods that contain lime and phosphorus. The best source of lime is milk. Next in

importance are green vegetables and fruits, especially apples. Whole wheat bread and toast are valuable foods in that they require chewing. The jaws and teeth need exercise.

Cakes, candies, and other sweets cause dental decay. This should be thoroughly impressed upon children.

Let us aim to have our school one hundred per cent with good teeth. Special effort should be made to send the eighth grade to high school with all dental defects corrected.

The following questions will guide teachers in the inspection:

Are the teeth clean?

Are they sound?

Are the six year molars in good condition?

Are the teeth in good contact when biting?

Does the child own a tooth brush and use it daily?

Has he been to the dentist within the last year?

Are the gums healthy looking?

Are the decayed teeth filled?

Some rules to remember in the care of the teeth:

Brush after each meal and before going to bed.

Brush for two minutes each time.

Use rotary motion on the back teeth and up and down on the front ones; brush inside and outside. Also brush the chewing surface.

Use dental floss to remove food particles from between the teeth. Use small and moderately stiff tooth brush.

Brush gums and tongue.

Whether cakes, candies, and other sweets actually cause dental decay the authors do not attempt to answer. There is a question in the minds of specialists in this field as to the effect of these articles of diet on the teeth. There are other reasons, however, why these foods should not be eaten excessively by children.

It would be difficult to estimate the value of keeping a child's teeth in good condition. Superintendent Willis A. Sutton of the Atlanta public schools reports that in 1924, through the generosity of Mr. Cator Woolford, an experiment was made at the Grant Park School to determine the relationship between mouth health and attendance and scholarship in the schools.

A dentist, a hygienist, a visiting nurse, and teacher were employed as the result of the gift of Mr. Woolford and, according to Superintendent Sutton:

Each child's teeth were put in good condition, beginning with the kindergarten and going through all the grades. The improvement in attendance was so marked that many children who had previously had an attendance record of eighty and below came up to ninety-five and ninety-six, and some of them even to one hundred per cent. In all, I should say, there was an improvement in attendance of around fifteen per cent. In promotion and scholarship the record was even better. Dozens of children who had been failing in practically all of their work were promoted and went rapidly on their way through the grades.

Taking this experiment as a basis for the entire city, it was conservatively estimated that if the mouths of the children in Atlanta could be kept in A-1 condition it would save on an average of from five to ten per cent of the children's time in school.

It is essential that those charged with the responsibility for the administration of the program clearly understand the objectives and the steps that are necessary to achieve them. They should appreciate that medical inspection is an economic measure; that anything that interferes with the child's normal physical growth is likely to retard educational progress; and conversely that the pupil's education is greatly facilitated if he is well and free from physical handicaps.

It is well to keep in mind always that it is not intended that the school health program shall take over the work of the family physician. It is the function of the department of health to discover any physical defects in the child, or to find those things that seem to threaten his physical welfare, and to report these to the parents. If treatment is needed and the parents are unable to meet the costs of such treatment, the department of health should do whatever it can to be of assistance.

The Teacher's Part in the Program. What place has the teacher in the program of health education where a full-time director of health is employed, and where one or more nurses work with the director in building a health program? The

teacher should make a survey of her pupils to determine their condition of health. She should know their mental and physical status, and, in so far as possible, she should work with pupils, school physician, school nurse, and parents to remove remediable defects. The teacher is the individual who is responsible in large measure for bringing to the attention of the director or supervisor of health any deficiencies in sanitation, or any indications of illness on the part of the pupils in school.

But health education is something more than the prevention of disease and the removal of defects. It should be wholesome and inspiring, with definite emphasis on positive health—on living in such a way that one's energy may be conserved and spent with the greatest satisfaction and efficiency, both for himself and the community. This means sound and wholesome habits and attitudes of living.¹

The teacher, therefore, is further responsible for teaching the content of health education and for the development of health habits on the part of the pupils in school.

In the last quarter of a century physiology has received less emphasis in the curriculum and hygiene, sanitation, and health have found a more prominent place. A study of the records of the United States census will indicate that there are fewer doctors in the United States today than there were twenty years ago, and this notwithstanding the large increase in population and a more complex social life. The health of the nation as a whole is decidedly superior to that of two decades ago, and, as shown previously, the average length of life is much greater. No one can say with any degree of certainty to what extent this is due to the program of health education that has been sponsored by the public schools of the nation, but no little part of it undoubtedly is due to the effectiveness of health instruction as carried out in the schools. If we assume that "health is primarily a matter of education and essentially a function of school education," and that "development of healthful be-

¹ Andress, James M., and Brown, M. A., *Science and the Way to Health*, Ginn and Company, page v of Preface.

havior is the chief aim of health education" ¹ we can begin to appreciate more fully the responsibility of the teacher in this program. Children should be led to form correct health habits that will make them stronger, better looking, better able to work and play, and better able to help others. The development of these habits is essentially a program of public education.

If teachers are to do this work well they must have the fundamental training necessary to understand the health program and they must have clearly in mind the goals to be achieved. The objectives of health education must be understood by the teacher and the subject matter must be worked out in the light of the objectives.

In all of this work the teacher is of primary importance. Quoting again from Dr. Charles H. Keene: "The classroom teacher is the foundation stone of any successful health program in the schools. Without her coöperation little can be accomplished. The teacher, therefore, should be kept fully informed of the physical condition of the pupils under her charge, and of all corrections of defects which have been made. She should coöperate to the extent of notifying the nurse promptly of any indication of communicable disease, and should send to the health room for inspection those pupils so suspected, as well as those returning to school following absence from sickness. At the end of the month the teacher should report to the nurse the number of corrections of defects secured, together with the name of the child and the nature of the defect." ²

Assistance in the control of communicable diseases is definitely a part of the classroom teacher's task. It is her duty to report any case that seems to her to be suspicious to the health department if there is one, and to the principal if there is no health department. She should ever be on the alert for the slightest indication of a communicable disease, and she should be prompt in reporting it to her superior officer.

¹ Merriman, Lillian M., "How to Start a Program of Health Education in a Rural School," *Kentucky School Journal*, September 1929, page 12.

² Keene, Charles H., *The Physical Welfare of the School Child*, Houghton Mifflin Company, 1929, page 146.

One of the very excellent things that all of the teachers in America have an opportunity to do is to correct the attitude of the public toward the use of patent medicines. There are still large numbers of people in the United States who are willing to believe everything they see in print. They do not know that most of the advertisements appearing in newspapers and magazines, bearing testimony to the marvelous results of certain types of medicines are fraudulent. If the classroom teacher can teach the child and the parents to consult a reputable physician when they are ill, she will have done a great service to public health in the United States. "There is no magic in drugs. Medicines advertised to cure tuberculosis, cancer, Bright's disease, diabetes, and heart disease are frauds, pure and simple, and have been exposed as such over and over again."¹

The Parents' Part in the Health Program. However effective the work of the teacher may be and however effective the work of the director or supervisor of health education, without the coöperation and the interest of the parents it is not easy to build proper health habits. Child health should be of primary concern to every parent, and the teacher should keep the parents informed about the work that is being undertaken to build proper health habits on the part of the pupils attending school. This may be done through parent-teacher associations or other organizations that bring the parents to the school, or through personal conferences with the parents concerning the welfare of the children.

Dr. Keene, in his excellent volume on health education, says that "With the parents, of course, the nurse's relations are most intimate, and to a great extent her success depends upon this relation. The parent, both in law and in justice, is the one person who is fundamentally responsible for the well-being of the child. Every effort, therefore, should be made to persuade the parent to modify home conditions to the best advantage of the child; also to secure treatment and, if possible, correc-

¹ *Course of Study and Syllabus in Health Education for Elementary Schools*, Board of Education, New York City, 1930, page 41.

tion of physical defects. The value of consultations between parent and nurse; parent, teacher, and nurse; and sometimes parent, teacher, physician, and nurse, cannot be emphasized too strongly. Consultations at school, however, cannot take the place of home visits.

"Conferences with parents will nearly always procure desired results. Only rarely is coercion of parents justified, although the laws of many states authorize the courts to compel parents to secure adequate medical and surgical care of children. The nurse should be thoroughly familiar with the laws of the state in which she operates, and should know the processes whereby these cases may be taken into court. It is essential, however, that this action should be brought about by the school principal in accordance with authority granted by the superintendent of schools, rather than that it should be inaugurated by the school nurse.

"The relations of the school nurse to the general public are those of an employee of the public, with the added factor that she has a large responsibility in assisting to check the spread of communicable diseases."

Nutrition in Relation to Health. Perhaps no factor is more vitally related to the proper physical development of the individual than proper foods and food habits. The progress that has been made through scientific studies of foods is fascinating. If this newly discovered knowledge is properly utilized, a far larger proportion of the population of the world will enjoy abundant health and joy in living. This new information is rapidly being made available through the instruction offered through home-making departments in our schools and colleges, health talks, articles on health in the daily papers and magazines, and through many other sources. Little children five and six years of age talk about the foods that contain vitamins, are interested in the vegetables that supply iron, and know that they take cod-liver oil as a substitute for sunshine.

¹ Keene, Charles H., *The Physical Welfare of the School Child*, Houghton Mifflin Company, 1929, pages 147, 148.

The subject of nutrition will be a problem for many years. The dissemination of adequate knowledge of foods is a difficult task, but making possible a social order that will enable each family to provide the proper foods for all of its members is far more difficult. Nor does the problem end here. If every family knew exactly what to buy and had the means to buy it, we would still have the problem of proper preparation and proper eating habits, both of which are exceedingly important in the relation of nutrition to health.

School systems frequently find that children return to school after vacation with a higher percentage of their number underweight than existed at the close of school the preceding term. This may be the result of irregular habits of sleep, rest, and recreation, during the vacation period, but it is more probably due to deficiencies in foods to meet the requirements of the growing child. Children from birth should be given proper foods so that they will develop good food habits and learn to eat all of the foods that are essential to proper eating habits before coming to school. Each year they are in school they should learn more of their own personal food requirements. They should learn to select those articles of diet that will provide the foods necessary for the upbuilding of the body. There are four classes of these foods and the individual must learn to use them wisely.

1. "Those that build and repair tissue; namely, the proteins. They are found in milk, eggs, cheese, lean meats, fish, beans, peas, etc.

2. "Those that give energy and warmth; namely, sugar, starches, and fats.

3. "Those that contain mineral salts, such as calcium, iron, phosphorus, etc. These are necessary for the building of strong bones and teeth and for enriching the blood and regulating all body processes. These elements are widely distributed among the fruits and vegetables.

4. "The protective and growth promoting foods are those foods which contain the vitamins. Very little is known about

vitamines. No one has seen or handled them but their absence in the diet produces certain diseases known as deficiency diseases. For the sake of classifying them, as they cannot be named, they are called by letters, A, B, C, D, E, F, and G. Vitamine A promotes growth, and is a protection against certain eye diseases. It is contained in milk, butter, eggs, and cod-liver oil. Vitamine B is also concerned in growth and protects us from certain nervous diseases. It is found in milk, the yolk of eggs, and the leafy portion of green vegetables. Vitamine C protects us from scurvy and is found in oranges, lemons, limes, tomatoes, lettuce, cabbage, spinach, and other green vegetables, also in milk and eggs. Vitamine D prevents rickets and is found in cod-liver oil. Vitamine E aids in iron assimilation and prevents sterility in young animals. Vitamine F aids growth and is found in liver and lettuce. Vitamine G prevents pellagra and is found in milk, red meat, and yeast. Hence, the importance of a well-balanced diet including milk. Milk is the most indispensable food, and should always appear in the dietary. Children should be encouraged to drink as much milk as they need, preferably about one quart a day. The principals are urged to use every effort to see that every child buys milk for lunch.

"The lessons in nutrition should be made attractive but practical. It is suggested that a study be made from the following standpoints:

1. Food.
2. The elements it contains.
3. What it does for the body."¹

Cleanliness in Relation to Health. The importance of cleanliness in the preservation of health cannot be over-emphasized. It is the duty of the home to establish habits of personal cleanliness in so far as it can possibly do so. It is the teacher's problem to begin where the work in the home left off and continue the building of cleanliness habits until the child shall have acquired those habits that are considered essential in a well-ordered society.

¹ *Health Bulletin*, Birmingham Public Schools, March, 1931.

Dr. Ray Lyman Wilbur, a former president of the American Medical Association, once said, "If I had to name that one health measure which would be most effective in the control of our great transmissible diseases I would say that a thorough washing of the hands at least each time before food was taken, would be the most effective."¹

Miss Ellen H. Richards once said, "Optimists look forward to the virtual extinction of diseases, but it will only be after children are taught cleanliness from the very first; brought up in clean houses; and sent to clean school houses through clean streets."²

The teacher's first task every morning is to see that the physical conditions under which she and the pupils work are made as nearly perfect as possible. She should give careful attention to the heating, ventilating, lighting, and cleanliness of the room in which they are to work. Her second obligation is to give just as careful attention to the children who are to work in the room and see that every child comes to school with hands properly washed, with finger nails short and clean, and with all of the other items of his personal toilet properly attended to.

Helps for Teachers. There is an enormous amount of material that may be obtained from many sources on all phases of health education. Standard weight tables for height and age, for boys and girls, have been prepared and are available for the use of teachers in public schools everywhere. Suggested health rules that are to be developed into health habits are to be found in many publications. One list of these rules, published in the *Kentucky School Journal*, September 1930, is quoted below.

SUGGESTIVE HEALTH RULES³

1. I washed my hands before each meal.
2. I cleaned my finger nails today.
3. I did not bite my finger nails yesterday.
4. I brushed my teeth last night and this morning.
5. I brought a clean handkerchief today.

¹ *Health Bulletin*, Birmingham Public Schools, March, 1931.

² *Ibid.*

³ Merriman, Lillian M., "How to Start a Program of Health Education in a Rural School," *Kentucky School Journal*, September, 1930, pages 13-14.

6. I drank four glasses of water.
7. I drank four glasses of milk.
8. I drank no tea or coffee.
9. I ate a good breakfast this morning (including a cereal).
10. I ate a green leafy vegetable yesterday.
11. I ate fruit yesterday.
12. I ate no candy between meals.
13. I had a bowel movement this morning.
14. I was in bed ——— hours last night, windows open.
15. I rested in bed one hour yesterday afternoon.
16. I played out of doors yesterday.
17. I took off my wrap and overshoes in school.
18. I looked both ways before I crossed the street or road.
19. I tried to sit and stand straight.
20. I had a complete bath on each day of the week checked (x).

Every good teacher will try to arouse the pupil's enthusiastic interest and pride in his own personal appearance. "By stimulating a desire to attain a perfect class record in cleanliness, neatness, and health, the teacher will obtain better results than by emphasizing the deficiencies noted." ¹

In the *Course of Study and Syllabus in Health Education for Elementary Schools*, New York City, may be found a suggested daily routine for each child of school age. The health program in New York City calls for the systematic daily practice of the following health habits which make a typical program for the child in that city:

DAILY ROUTINE ²

Throughout the entire course an endeavor should be made to put into systematic daily practice the health habits learned at school. The following is a typical program:

1. Rise promptly and in time to make thorough preparation without hurry.
2. Take breathing and setting-up exercises appropriate to the grade.
3. Wash, with warm water and soap, hands (use hand brush), face, neck, and chest. Clean finger nails.
4. Clean the teeth. Brush the gums. Rinse the mouth. Drink a glass of water.

¹ *Courses of Study and Syllabus in Health Education for Elementary Schools*, Board of Education, New York City, 1930, page 15.

² *Ibid.*, pages 20-21.

5. Dress, inspecting clothes as to cleanliness.
6. Eat breakfast, chewing food well.
7. Attend the toilet. Wash hands afterward.
8. Prepare for school. Books and clothes should be clean and in good order.
9. Observe regulations for entering school building.
10. Care for outer clothing. Attend to order of desk. Prepare for daily morning hygiene inspection.
11. Keep correct sitting and standing posture at school.
12. Drink water at recess. Use individual drinking cup or bubble fountain. *Caution: Do not touch anyone who is using a bubble fountain.*
13. Return home for luncheon, without loitering. Wash before luncheon. Chew food thoroughly.
14. Play in fresh air after school.
15. Study. Pay attention to lessons and complete the work.
16. Wash and prepare for the evening meal.
17. Prepare for bed early. Attend the toilet, wash, brush teeth, put clothes where they will be aired during the night, and open the window.
18. Sleep 9 to 12 hours, according to age. (Children from 5 to 7 years of age require from 11 to 12 hours of sleep; those from 8 to 11 years of age require from 10 to 11 hours of sleep; those from 12 to 14 years of age require from 9 to 10 hours of sleep.)

Building Personal Health Habits. Developing proper health habits in the pupils in any school requires a large amount of individual teaching. There is a vast difference in health ideals and health habits in children from different homes in the same grade and room. From some of the so-called "best" homes one may expect to find a great lack of proper health habits. In some homes the parents will check up on the child's personal health habits much more carefully than in others and will insist on a proper routine. As a result, some children come to school with a better background of information and with better and more firmly established habits than other children. It is the problem of the teacher to study all of these children, to discover their deficiencies, and to teach them those things that will insure to them the attitudes, ideals, information, and habits that make for positive, exuberant health.

Further Helps. It is not the purpose of this chapter to discuss all phases of health education. Sleep, rest, sunshine, fresh air, pure water, temperance, exercise, posture, and many other subjects could be discussed more fully and to as good advantage as the discussions incorporated on nutrition and sanitation. The effect of the use of alcohol, tobacco, coffee, and other stimulants might well be included to advantage in this chapter if space permitted. Information concerning all of these items will be found in publications that are available to every teacher in the United States. Excellent helps for teaching public school health may be obtained by writing to the American Child Health Association, New York City; The Cleanliness Institute, New York City; the Metropolitan Life Insurance Company, New York City; the Office of Education, Department of the Interior, Washington, D.C.; Children's Bureau, United States Department of Labor, Washington, D.C.; city school systems; state departments of education; state departments of health, and other organizations and institutions interested in public health work.

QUESTIONS AND EXERCISES

1. Is the increase in the average length of life due to the fact that we can make adults live longer or is it due to the fact that the mortality rate of infants and babies has been greatly lessened? Do better economic factors tend to lengthen life? How?
2. Make suggestions as to how the small rural community might conduct a health program.
3. Is it better to teach health by means of subjects such as physiology and hygiene or through projects? Explain.
4. Note the claims made for tooth pastes as revealed through advertisements. To what extent do medical men agree with these claims?
5. Collect statistics to show what diseases are most prevalent. Try to find the estimated number of people who have "colds" each year and the estimated economic loss due to this infection alone.
6. Should children who have colds be sent home from school? Should teachers know the symptoms of various child diseases?
7. Should children in school be vaccinated for smallpox where the parents will not give their consent? Justify your answer.

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8. Think back over the schools you attended and suggest some things that could have been done to make the premises and schoolrooms more sanitary.
9. Suggest a breakfast menu for a child eight years of age; twelve years of age; sixteen years of age. Is the average school child interested in vitamins?
10. Are there any dangers that children may drink too much milk? Eat too much spinach?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XVII

CHARACTER EDUCATION

Moral or character education is being pushed to the forefront in our schools today. It is only reasonable that when children are being urged to think for themselves and to question the why of anything, that the why will also be applied to some of the things that have been considered moral. To be moral one must conform willingly to the ideals of the group. This involves intelligence, and should involve purpose or will. Manifestly, a man who keeps all the mores of the group because he is shut up in prison cannot lay claim to being moral. The moral individual will obey the mores of the group, not because he must but because of his own free will and choice. When, then, one finds a country like ours, which is said to be the most lawless civilized nation on the face of the earth, it is quite evident that many, perhaps a majority, of its people do not conform to the ideals of the group. Not only do they not conform, but there seems to be a strong feeling that they are under no obligations to conform if they can keep from being caught within the meshes of the law. There are doubtless several contributing causes to such a situation. Only three will be mentioned here.

First, the inculcation of the "why" attitude in school pupils. It seems that the "why" of geometry theorems, the "why" of discipline, and the "why" of the curriculum are being transferred to the field of morals. This point has been well expressed by Kilpatrick in the following statement: ¹ "For us possibly the most significant instance of shift from authoritarianism is one going on visibly under our eyes during this very decade. The

¹ Kilpatrick, William H., *Education for a Changing Civilization*, The Macmillan Company, 1926, pages 33-35.

reference is to morals. It seems to be true of the parents of this country in general that, up to the present time, as they have taught their children what was right and what was wrong they have based their teachings frankly on authority. They might say that certain things were wrong because 'the Bible says so,' or because their church so taught. Or they might say in more worldly fashion, 'It isn't done.' However stated, the rightness or wrongness was, generally speaking, given frankly on the authority of book, church or custom. Parents so taught and children so accepted. It is, of course, true that children did not always obey the right or refuse the wrong, but if they didn't, on the whole they acknowledged, if detected, that they had been doing the wrong. The standard was admitted, even though they chose to disregard it.

"But a change has come over things. Old ideas no longer hold as to certain proprieties. Discussion and deportment follow lines once emphatically rejected. And what is most significant, questions as to the justifying 'why' of conduct are being asked. A girl was overheard to say to other girls of her group—a decent looking group it was—'Well, I am going. If my brother can go to such a place, I see no reason why I shouldn't, and I am going.'

"In the youth of this girl's mother it had sufficed to say: 'Nice girls don't go to such places. It simply isn't done.' Apparently this girl had heard the same thing but now it fell on deaf ears. Times have changed. Voting, bobbed hair, short skirts, are symbols of a new freedom, a freedom which asks why and demands an answer before it accepts."

A second reason for a failure to conform to the social code is that the ideals of the group often lag behind social changes. Undoubtedly this accounts for much of the immorality that exists today. The radio has broadened the outlook on life. Through the radio our young people can hear the best speakers, the best music, the worst music, sex appeal, and crime pictured. Knowledge is disseminated rapidly, contacts are made at the age of five years that formerly were not made at twenty-five years of age. In the movies, sex appeal, current pictures from all parts of the

world, crime, war in all of its hideous reality, and almost every imaginable type of occurrence is vividly pictured and drilled in until it would appear well-nigh impossible to remove the impressions. Automobiles have made it possible for people from all parts of the nation to mingle. They have made it possible to commit crimes and escape more easily. They have narrowed the world until one's local environment is relatively much less effective than it used to be. Leisure time has been increased. The shorter day has released millions of hours that formerly people would of necessity have spent at their vocation. All of these situations must directly affect the matter of character education, especially when the bulk of our people fail to realize that these social changes are going on. A failure to note the significance of these changes means that the group will endeavor to hold to worn-out old ideals and mores. The result is a breaking of the group mores by a great minority of the group, and when some of the mores are violated, the tendency to violate others continues to grow.

A third cause for much violation of the group mores is the ease with which small, active minorities can sometimes put rules and regulations through that affect the whole group. In a democracy laws should be obeyed regardless of what one thinks about them, but unless the force of group loyalty is exceedingly strong no law will or can be enforced in which the majority do not believe. That is why there is a strong feeling in this country that what is needed is not more laws but fewer and more sensible laws—laws that the majority believe in and want obeyed. The tragedy of a few laws not heartily endorsed by the majority is that a tendency to violate all laws is created. A tendency to violate laws builds up a disrespect not only for law but also for our fellow men. Selfishness at any cost is the result. Consequently, in the violation of law, the very core and fabric of moral qualities are endangered. If, then, moral or character education is to be effective, the consciousness of the group feeling must be heightened. Loyalty to the group, and fair dealings with its members must hold the focus of attention.

What Place Should the School Occupy in Teaching Character Education? The school should always act as a residual legatee. The home, the church, the state, and the school must be jointly responsible for character development, but in a way the school is more responsible than any of the other agencies because it is the business of the school to carry on even though other institutions fail. Now there is considerable evidence for believing that the other agencies than the school are not developing character as well as they once did, at least not relatively as well as they once did. If social life is so complex that stronger characters are needed today than ever before, it is evident that the home, the church, and the state could be doing as much in the way of character development as ever before, but they may be doing less in relation to the demands of society. If this is true, then, the school's job is relatively greater in this respect. What, then, is the position of the school today in relation to character education? One of the best answers that has been given to this question is found in the *Fourth Yearbook of the Department of Superintendence*. In this book the committee on character education reports its findings from a questionnaire study of 229 cities in the United States. After working over this wealth of materials, the committee sets forth its impressions in the following:¹

1. Throughout the country there is evidence that the schools are, according to their best light, promoting character development in children. In many cases the efforts are seemingly feverish, anxious, and even frantic in character.

2. It is impossible to discover any body of settled conviction as to the experiences and subject-matter which should be productive in large ways of character results.

3. There is little evidence of carefully thought-out, well tested techniques of procedure which may be employed in securing character results. . . .

4. The best results in character education are being secured in the classrooms through the relationships existing between children, and children and teacher, and through the procedures employed in the educative process.

¹ *Fourth Yearbook of the Department of Superintendence*, National Education Association, Washington, D.C., 1926, page 381.

5. Very high value in character training should undoubtedly be assigned to the opportunities provided students to participate in the activities of the school which they attend, and in thinking about and taking responsibility for the improvement of the school as a place of living and working.

From the above it would appear that the schools are very much in doubt as to how to proceed in order to make character education effective. To the writers, the development of character in our boys and girls seems to be the biggest job the school has to undertake. Consequently, the schools which appear to be in doubt about how to proceed with this most important function, raise at once the question of the causes of the apparent dilemma. Four probable causes will be suggested:

Religion and character education are too much segregated. The schools in the United States a long time ago fought out the question concerning the separation of school and church. This country is definitely convinced that the church should have no control over the public schools. From this it apparently has been assumed that religion has no place in the schools. Now, when one shuts the teaching of religion out of the schools he will always have a hard time with moral education, for there is a rather close connection between the two. "Indeed religion in its highest form has been aptly defined as morality touched with emotion, and, perhaps one might add, with meaning."¹ Certainly there can be no doubt of the close relationship between morals and religion. It would appear that the very basis of character or moral education is a strong religious conviction. Not the conviction one holds concerning merits of any particular creed, but the religion that aids one to understand better the relation between the creator and his creation. An overwhelming percentage of mankind believes in a telic universe. They not only believe that there is a definite purpose back of the universe, but they also believe that a higher power than man had something to do with its establishment. The wonders

¹ Chapman, J., and Counts, George, *Principles of Education*, Houghton Mifflin Company, 1924, page 340.

of nature are on every hand. The teaching of religion in school is not a question of whether Confucius, Brahma, Gautama, or Jesus, or some other personage was especially endowed for teaching the relationship that should exist between the creator and his creation. It is not a question of creed. It is, or should be, simply an attempt to help the boys and girls in our school-rooms to have a better conception of the universe and their relation to it, also a better conception of the creator and their relation to him. Consequently it would appear that the schools are wasting time in wondering whether they should teach religion. Our schools ought to be bathed in an atmosphere of religion. When this is done and done correctly it will be seen that moral education will not be a problem; in fact, to educate boys and girls to appreciate their relationship to other men in particular and to know their relation to the universe in general, is moral education. When moral education is attacked through the avenue of religion, we ought to see a great lessening of the influence of intolerance, bigotry, and formalism. By this means it should be possible to impress men with the desire to live a life of inward controls, rather than a life of narrow external practices.

Doubt as to the effects of other institutions in impressing character development makes the school in doubt as to its own procedure. There seems to be a general belief that the church, the home, and the state are failing to do an effective job of teaching character education.

To him who can read the signs of the times it is evident that, shortly, the responsibility for the moral education of the children will be laid upon the schools. In the past such education, when not given by the home, a natural school, was entrusted to the church. However, the social situation has changed so rapidly that neither the home nor the church has been able to adjust itself correspondingly. Today, the efforts of the home and the church combined are proved inadequate by the rapidity with which disintegrating changes are taking place, both in them and in society. Moral practices change steadily from bad to worse. The public is alarmed and a thousand remedies are proposed.²

² Courtis, S. A., "The Development of Standards of Conduct," *School and Society*, September 10, 1927, page 322.

Undoubtedly what is needed is a careful survey made of the work being done in this respect by each institution which is responsible for character training. When the weaknesses of all contributing agencies are known, the school will be in a position to launch out on some definite program of character training that can be made effective.

The school is in doubt as to the real aim in moral education. The question as to whether one should aim, in moral education, to teach character or conduct has been raised time and again. The relationship that exists between character and conduct has apparently caused confusion in the minds of some of the best thinkers on the question of morals. It often happens that one finds an individual whose conduct does not at all agree with his character, as we say. However, it is likely that in such cases the term character is being confused with reputation. As has been well said, character is what one is, his reputation is what he is thought to be in the minds of his friends and relatives. There surely cannot be any great discrepancy between what one really is and the way he acts, generally. In other words, conduct and character are not only closely tied together but one acts as a stimulus in the development of the other. Kilpatrick has well expressed this point as follows.¹ "We bring with us into the world the beginnings of a character (C). As soon as this character (or nature) interacts with the outside world conduct (c) ensues. But this conduct (c) changes somewhat the original character (C) and so gives us a somewhat different character (C¹). When this character (C¹) interacts with the outside world conduct ensues. But because the character (C¹) was different this new conduct (c¹) is somewhat different, we get then, a series like the preceding, C c C¹ c¹ C¹¹ c¹¹, in which each instance of conduct flows from a preceding character and leads to a somewhat new character." Doubtless as Kilpatrick says, the more immediate aim in teaching moral education should be the conduct.

¹ Kilpatrick, William H., *Foundations of Method*, The Macmillan Company, 1925, page 313.

The school has also been in doubt as to the relationship that should exist between character education and any other kind of education. Undoubtedly the more or less implied belief that character education was something apart from other kinds of education has helped to hinder the effectiveness of character education. Character development is not something apart from education, it must result as an outgrowth of education. The same laws that govern the learning of anything else must govern the learning of activities that tend to develop strong characters. The three cornerstones on which moral education must rest are the child, the situation, and the connection that is built up in the child's nervous system when he responds to the situation. Here is a situation: Money lying on a table in a room, no one around but one individual to whom the money does not belong. The response the school wants to build is, walk off and leave money alone, or if in doubt about whether it is lost, take money to rightful owner. There is just one way that the appropriate response can be built up in connection with such a situation and that is by utilizing the laws of learning, exercise, readiness, and effect. Never fail to reward the correct responses and let annoyance always attend the wrong. Precise practice operates here the same as in any other situation. What the school should try to do, then, is not to attempt character development apart from education, but to so shape the environment that moral education and character development will result therefrom.

What Method Shall Be Used in Teaching Character Education?—*The indirect method.* There is a strong sentiment in this country that moral or character education should be presented indirectly, that is, it should be taught through school subjects rather than as a separate curriculum. From this point of view it is considered far more important to have the moral atmosphere pervade the teaching, the curriculum, and the teaching personnel than it is to teach about morals. By the indirect method, morals would be taught every day in the week. By the direct method, certain periods of the day would probably be set aside for moral instruction. The indirect method has the following advantages:

1. Instruction is given at a crucial time. If the trait one wishes to develop in a child is that of promptness, it is far more effective to give the instruction, fasten the reward or annoyer at the time the child is prompt or not prompt, than it is to talk about the importance of being prompt. It would appear to be more effective to explain what should be done at the time the street car conductor hands back a nickel too much change than to talk about what should be done in such a situation at a time when no actual situation exists.

2. Moral instruction given at the time that the actual situation presents itself makes it more likely to be applicable to life situations than if hypothetical cases must be utilized. Mind-set, purpose, is strongest when actual situations or felt needs exist. To take hypothetical cases as illustrations always leaves one conscious of the fact that they may or may not apply in his life. There is also the danger that even if the situation does actually present itself in the distant future that the response built up to the hypothetical situation cannot be recalled. In other words, in the same way that the mind-set facilitates learning the activities involved in the project method, so in the same way will it facilitate learning the correct moral responses when actual situations are presented.

3. A third advantage of indirect moral instruction is that precise practice is more likely to occur. If I, the teacher, see the conductor hand back to my pupil a nickel too much change I not only explain to the pupil what should be done but I see that he hands the nickel back. He actually practices the activity where the trait I am endeavoring to develop is involved. In other words, the philosophy of Dr. Kilpatrick that "To learn anything, we must somehow practice that thing" is being utilized. After repeatedly practicing this activity under many situations, the trait of honesty will undoubtedly tend to appear as a part of the life and fabric of the one who is making the practice.

Among the arguments sometimes advanced against the indirect method of instruction are:

1. The danger that always goes with incidental instruction, namely, that it will not be taught at all. The incidental teaching of spelling has not been a success. It is recognized in spelling that each word to be spelled must be attacked directly and that a certain specified time for spelling must be set aside.

In the same way it is sometimes argued that we must come to the same realization about moral education. In this connection Charters has commented as follows: ¹

If the selection of traits and situations is left to the mood of the teacher and to the accidents of the schoolroom, there can be no certainty that anything like a comprehensive treatment of character and personality will be attained. The school should have a survey of the traits, situations, and trait actions that are, in general, to be taught during school life. It should be distinctly understood that this does not mean a systematic order of presentation from day to day. It does, however, most emphatically mean that the school must know with definiteness what items are to be covered during school life and, as far as practicable, must allot to each grade and each class those which are to be given major emphasis during each year. These items should then be checked off against the blue print at regular intervals to discover which are in the way of being covered too often and which ones are neglected.

2. Indirect teaching is not likely to emphasize all the essential traits in education. If the teacher of mathematics teaches moral education indirectly, she will doubtless emphasize such traits as speed, accuracy, and thoroughness. The teacher of English may emphasize neatness, exactness, and so on, but there is always danger that unless moral education is taught directly there may be some important traits that will not be emphasized by anyone. For this reason it is important that an analysis of activities and subject-matter be made and a definite decision reached as to what traits and ideals are to be developed, if the indirect method of teaching moral education is to be used.

The direct method. Charters has set forth the distinction between direct and indirect moral instruction in this way: ² "By

¹ Charters, W. W., *The Teaching of Ideals*, The Macmillan Company, 1927, page 165.

² *Ibid.*, page 184.

direct moral instruction we mean that form of instruction in morals which begins with a consideration of traits. This is in contradistinction to indirect moral instruction in which we begin with a consideration of situations." Dr. Charters believes that the basic method of moral teaching should be the indirect method, but that since the indirect method breaks down in many places the direct method occupies an important place as an auxiliary or supplementary agency. It appears to the writers that the more our pupils become conscious of their own weaknesses, the more probable it is that the direct method of moral instruction will be effective. If I realize I move and work slowly, and wish to do something about it, direct instruction on speed will be effective. On the other hand, if I do not care to move differently, or perhaps am unconscious of its importance, the more probable it is that to be effective the instruction must be indirect. In actual situations the price of slow action must be pointed out, and the rewards for rapid movement must be realized.

Charters lists the advantages of this method as twofold:

1. It provides conditions favorable for enthusiastic work so that through suspended attention it produces a powerful momentum.
2. It gives teachers and pupils the opportunity to systematize and summarize the traits in a number of ways.

Of course its greatest weakness is that the instruction will be given at a time when there is no felt need for it. Learning that I must not take apples from the stand when there are no apples around may not be effective when I meet a situation where there are fruit stands with apples.

A third method in teaching moral education is one which attempts to inculcate purposes but gives practically no attention to conduct, either directly or indirectly. Those who take this view assume that one has the intelligence to know what to do and that the important thing is to shape his environment so that the right purposes will be developed. Doubtless this method will assume a more important position in the future. Strictly speaking no

one could ignorantly do an immoral act. If one does the wrong thing because he does not know it is wrong, it is spoken of as a non-moral act rather than an immoral one. It would appear, then, that if moral education is to be developed, two things are essential:

1. That the right be definitely known and always kept in the realm of conscious attention.

2. That the will to do the right be present. There can be no doubt that the failure of the will to do the right is the greatest weakness with most of us and he who attempts to develop this trait or purpose in individuals is working at the bedrock of moral education. It is to be hoped that the future will give us more insight into how to do it. Doubtless it will be found that right purposes cannot be developed apart from situations.

Means Utilized by the School in Teaching Moral Education. There are many things the schools can do in their attempt to aid in developing strong characters. Among these are:

Chart as definitely as possible the deficiencies in the conduct of pupils. A number of studies have been made which tend to show the most common delinquencies among pupils. One of the best of such studies is one which was carried on under the direction of Professor Germane of the University of Missouri. The data were collected over a two-year period by 915 teachers who used their schools as fields for study. The report shows the data on 2,442 individual cases and 230 group cases. Of the eighty-four different kinds of delinquencies listed, the twenty-six shown in Table 15 (page 412) were the most frequently found.

See that the influence of the teacher tends toward a high level of moral standards. There is probably no age represented in the schoolroom when the instinct to imitate and the powers of observation are not strong. The little boy who went home from his first day of school and replied, "Why, mother, the teacher even eats like we do," was expressing in a way the great admiration most pupils have for the teacher. This makes it highly important that the teacher live an exemplary life. Not only her

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TABLE 15¹
RANKING AND FREQUENCY OF DELINQUENCIES *

DELINQUENCY	BOYS	GIRLS	TOTAL
1. Theft.....	158	73	231
2. Lack of interest.....	175	22	197
3. Disobedience.....	149	43	192
4. Selfishness.....	115	62	177
5. Poor sportsmanship.....	112	30	142
6. Lying.....	72	59	131
7. Cheating.....	85	43	128
8. Mischievousness.....	86	22	108
9. Discourtesy.....	81	15	96
10. Lack of self-control.....	59	14	73
11. Stubbornness.....	39	33	72
12. Disregard for property.....	45	23	68
13. Anti-socialism.....	38	22	60
13. Bullying.....	56	4	60
14. Near-incorrigibleness.....	46	10	56
15. Truancy.....	39	13	52
16. Unadjustment.....	34	16	50
17. Non-coöperativeness.....	33	14	47
18. Irresponsibility.....	36	9	45
18. Pugnacity.....	39	6	45
19. Quarrelsomeness.....	28	9	37
20. Vulgarity.....	18	10	28
21. Slovenliness.....	14	8	22
22. Profanity.....	20	0	20
22. Tardiness.....	16	4	20
23. Smoking.....	12	6	18
24. Laziness.....	10	6	16
25. "Smart-aleck-ness".....	10	5	15
25. Bossiness.....	13	2	15
25. Snobbishness.....	2	13	15
26. Uncleanliness.....	6	7	13
26. Immorality.....	0	13	13

* This table is read thus: Of the disciplinary problems reported, theft ranks first, there being 158 cases among boys, and 73 among girls, making a total of 231, etc.

habits, but her attitude should be bent strongly in the direction that leads to a high moral level. It will be found difficult to teach pupils effectively to develop any trait which the teacher does not possess, and if a teacher's attitude is not one of moral

¹ From *Character Education*, with the permission of the authors, Charles E. Germane and Edith Gayton Germane, and the publisher, Silver, Burdett and Company, p. 143.

uprightness she will not be on the alert for situations in which moral education can be impressed.

If teachers would be influential in teaching moral education they should possess a sympathy with and a personal interest in children. Probably in the near future school administrators will give more attention to the home life of the teacher. If a teacher is to impress the importance of thrift, it is highly desirable that she have a background in which the importance of thrift has been stressed; if she is to teach honesty, she should have so lived that a check on her past history will not reveal handicaps to her influence. If she wishes to teach industry, she should not only be industrious but she should be able to call up instances in her own life where the trait of industry paid abundantly.

Teach character education through the curriculum subjects. It seems to be a general opinion among educators that the method of teaching a subject is probably more important than the content of the subject when it comes to impressing moral qualities. No matter how important the content of a subject, if it is presented on a level that the child cannot grasp, it tends to develop failure and a not-try spirit. If slipshod, careless work is allowed to be presented, the wrong trait is being developed. If pupils are permitted to master their lessons halfway, it will tend to make it impossible for the teacher ever to develop the ideal of thoroughness. In this connection it should be pointed out that all activities should be purposeful, meaningful, and integrating. Activities that are satisfying are far more likely to be accompanied by the right emotional attitudes than are more purposeful activities.

Activities that are not dominated by strong purposes and a feeling of satisfaction cause truancy, tardiness, cutting of classes, cheating, and a host of other traits which are the opposite of those moral education undertakes to develop. A quotation here from the *Fourth Yearbook of the Department of Superintendence of the National Education Association* will be in order:¹

¹ *Fourth Yearbook of the Department of Superintendence*, National Education Association, Washington, D.C., 1926, page 407.

The most effective moral training can be given when the child engages in purposeful activities in which he finds it necessary to choose between right and wrong. Then he can with the teacher's guidance build up concepts of right and wrong and gain practice in making right choices. But the effectiveness of an activity program depends upon the teacher. If she leads the child into activities too difficult for him or worse still, *arbitrarily assigns a task* beyond his capacity, the weak pupil is liable to resort to subterfuge. For instance, Billy was asked to make a report in geography on a subject he could not comprehend, so he copied the material from the encyclopedia and presented it as his own.

There is no subject in the whole curriculum that has a monopoly on the opportunities presented for character development. Note the importance of the following subjects in this respect:

1. GEOGRAPHY. Geography presents a fine opportunity to develop the attitude of internationalism. It helps in developing an attitude of tolerance, a characteristic so badly needed in this day. It destroys race prejudice, one of the worst curses of mankind. It develops a world point of view, and should aid materially in helping the pupils to see that there are some dangers as well as good points in that trait we call nationalism. When it is seen that all peoples are dependent upon their environment and are largely the products of their environment, greater sympathy will be shown to other groups of mankind. Let one but take a journey in book form through Japan where the life of the Japanese is truly depicted and he will have less sympathy with the average attitude entertained toward Japan. Let him but once know the crowded conditions that exist in Italy and he will be more in sympathy with Mussolini's desire to have his country expand.

2. LITERATURE. Characters in literature can be made to speak the importance of proper traits. By having the bad character punished and the good one rewarded the right traits for high moral levels are made to stand out. A little boy was heard to question another little boy for making a comparison between Christmas gifts. An explanation brought out the fact that the boy had developed a sensitiveness on the comparison of gifts

due to a story he had read in which a comparison of gifts brought extreme sorrow to one of the characters.

Probably through literature more than any other subject one can appreciate the fact that the highest type of happiness comes through rendering service to others. Compositions and dramatization present a fine opportunity for the development of higher levels of appreciation and thinking. Biography holds out incentives to try, to aspire, and to serve. Poetry, with its rhythmic effect, lifts to nobler thoughts. What child can read

I would be true, for there are those who trust me;
I would be pure, for there are those who care;
I would be strong, for there is much to suffer;
I would be brave, for there is much to dare.

and not feel the impulse to be a little better, a little purer, and a little braver?

3. MATHEMATICS. The application of mathematics to life, and its importance as a quantitative measure can be utilized to develop many traits of the moral fabric. Scales, mathematically precise, check dishonesty and make it possible to catch those who would short-weight others. The accuracy developed in the mathematics class will tend to carry over, and no subject is more conducive to thoroughness than mathematics. One of the writers majored in mathematics in his undergraduate work. For his graduate work he majored in the field of education. No one knows better than he the difference in the methods of attack and the extent to which the technique in mathematics tended to carry over. He knew exactly when he had finished his mathematics lesson. In the same way he tried to be just as thorough in education and make certain that he had learned his lesson by committing to memory every little detail in the assignment. It took some time to learn in the general field of education that the general idea rather than the exact details of the author's presentation was what was wanted.

Other subjects could be treated here, but these are sufficient to show that the method of teaching a subject is quite as important

as the content, if not more so, as an influential factor in moral education.

The development of character education through extra-curricular activities. Recently one of the writers addressed a father and son meeting held under the auspices of the Hi-Y Club. The ideals for which this club stood were brought before the meeting. The tendency of the Hi-Y Club to elevate the morals of the whole high school was shown by the superintendent's report. It was shown that the club had taken the lead in stamping out the use of profanity. Through its activities tardiness had been greatly reduced. Cheating and fraud had been almost completely eliminated, and the slogan "Service for others" had done much to teach group welfare. The importance of correct posture, the correct use of English, the ability to look another person in the eye when talking, the value of neatness, and the desirability of clean premises at school and at home, had all been stressed, and according to the superintendent of schools had produced a wholesome effect upon the whole school.

Almost all extra-curricular activities can be so conducted that they are fine ways of building moral habits, but here, as in curricular activities, the method as well as the content is important. Athletics is a fine extra-curricular activity for teaching fairness, group coöperation, mental discipline, and initiative, if rightly performed. The value of athletics, however, can be greatly curtailed with the wrong type of leadership. A football coach known to the writers has always felt that he should do everything for his boys. If the team was to go to some other field to play it was the coach who saw to it that everybody had a means of getting there, and just what boys were to ride in certain cars. He saw to it that all uniforms were ready for wear and that the other equipment was all properly loaded. He tried hard to have a good team but apparently tried just as hard to take all opportunities for initiative away from the players. Another high school coach follows almost exactly the opposite procedure. If a game is scheduled where the trip can

be made by automobile he simply says to each player, "Find out how you are to go and let me know by a certain time." This coach does not consider it his business to see that everybody is provided with a way to get there, or that the ball will be taken or that all suits are to be cleaned. This responsibility is put upon each player. It is the player's individual job and if he hasn't the initiative to see that it is done he suffers the consequences. This coach believes that some of the things to be learned in playing football are initiative and responsibility, and he sees to it that the players have the opportunity to learn them.

So it is with almost any other type of extra-curricular activity. The measure of the responsibility and participation permitted the pupils is a good measure of the contribution of such activities to moral education.

The development of moral habits through student control. In student self-government, now carried on by probably one-half of our high schools, pupils not only learn moral responsibility but usually have a chance to see it practiced on a rather extensive scale. Student control should be broader than mere discipline or keeping order. It should involve responsibility for assembly room periods, school publications, and school entertainments. Such outgrowths as fair play, respect for property, fairness, justice, promptness, and decisiveness, will almost surely develop.

The teaching of character through moral codes and moral traits. Codes of honor have always proved effective and there seems no reason why codes of morals should not be. A code can be used as an appeal to pride and loyalty, so that certain activities will be practiced with purpose and mind-set, thus more nearly assuring their effectiveness. A number of codes are now in use in different school systems but perhaps the Hutchins code is among the most widely used. William J. Hutchins, President of Berea College, won the Donor's prize of \$5,000 in the National Morality Codes Competition, 1916, for the best children's code of morals. His "Children's Code of Morals for Elementary Schools" consists of ten laws as follows:

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1. The Law of Health. The good American tries to gain and to keep perfect health.
2. The Law of Self-Control. The good American controls himself.
3. The Law of Self-Reliance. The good American is self-reliant.
4. The Law of Reliability. The good American is reliable.
5. The Law of Clean Play. The good American plays fair.
6. The Law of Duty. The good American does his duty.
7. The Law of Good Workmanship. The good American tries to do the right thing in the right way.
8. The Law of Team-Work. The good American works in friendly coöperation with his fellow workers.
9. The Law of Kindness. The good American is kind.
10. The Law of Loyalty. The good American is loyal.

In some schools certain traits are set up as goals and then from these traits action traits are worked out. Then school situations in which these trait actions are involved are discovered and carefully guided to fit the different grade levels. Such a procedure may be found incorporated in a character education plan that has been worked out by Professor L. Thomas Hopkins of the University of Colorado, Boulder, Colorado.

The traits, twenty-nine in number, which Mr. Hopkins has set up as underlying good citizenship are as follows: ¹

- | | |
|----------------------|--------------------------------------------|
| 1. Morality. | 16. Appreciation of beauty, people, humor. |
| 2. Good health. | 17. Desire for improvement. |
| 3. Honesty. | 18. Sympathy. |
| 4. Initiative. | 19. Punctuality. |
| 5. Adaptability. | 20. Courtesy. |
| 6. Judgment | 21. Foresight. |
| 7. Industry. | 22. Tact. |
| 8. Responsibility. | 23. Self-judgment. |
| 9. Self-control. | 24. Reverence. |
| 10. Courage. | 25. Unselfishness. |
| 11. Service. | 26. Neatness. |
| 12. Coöperation. | 27. Sociability. |
| 13. Open-mindedness. | 28. Thrift. |
| 14. Happiness. | 29. Generosity. |
| 15. Thoroughness. | |

¹ *Fourth Yearbook of the Department of Superintendence, National Education Association, Washington, D.C., 1926, page 434.*

Other means of teaching character education are being used. In all of them an attempt is being made to integrate personality and to lift boys and girls to a higher moral level. The importance of good moral character is realized by all, but at present we find ourselves in a doubtful state as to which way to proceed. Consequently it would appear that what each of us ought to do is to take seriously the rather recent words of Mr. Courtis:¹

Each one of us, therefore, should consciously obligate himself to do three things:

1. To read and study thoughtfully all objective evidence bearing upon this important field of work, however small its contribution—there is danger in despising small beginnings.
2. To appraise with care his daily work to discover whether or not we ourselves are making the most of opportunities close at hand—we, too, may have something to contribute.
3. So far as in us lies, to hear the call for volunteers to test, measure, tabulate, and interpret and pay the price in hours of weary labor that is the cost of progress in all new fields of labor. The need is great and pressing, the laborers few. Let each of us ask himself the question, "What can I do to help?" and act according to his answer.

QUESTIONS AND EXERCISES

1. Is obedience as much in evidence today among children as in the days of much corporal punishment?
2. What do we mean by the expression "internal checks on control?" Are there any dangers in trying to answer the "why" of our children? If so what are they?
3. Collect statistics on crime in other countries and compare them with the statistics of our own country. Is it true that "America is the most lawless civilized nation" of them all?
4. To what extent can one judge the criminal tendencies of a nation by its statistics on crime? Are such statistics reliable? Are the methods of computing in all countries the same?
5. How might one find out what other institutions in a certain community are doing in building character?
6. What are the arguments for and against treating character as biologically inherited?

¹ Courtis, S. A., "The Developments of Standards of Conduct," *School and Society*, September 10, 1927, page 325.

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7. If one wants to build character should he aim at character or conduct? Which comes first, character or conduct?
8. Were you conscious of the fact that character education was taught in the schools you have attended? Was the direct or indirect method used?
9. Show how the teacher's personal life may affect the character of her pupils.
10. How do school failures affect character?
11. Of what value are moral codes in the development of character?
12. From your experience do you believe that extra-curricular activities do aid in developing character? How?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XVIII

SAFETY EDUCATION

Data collected by the National Safety Council indicate that there was a total of 99,000 accidental deaths in the United States in 1930 and that there were probably near 10,000,000 non-fatal personal injuries. Accidents measured in terms of dollars cost the nation billions each year, but this is not the greatest cost. In terms of heartaches, mental anguish, and physical suffering, their cost cannot be measured. Accident prevention measures are being promoted through a safety education program today to the end that the economic loss and the physical and mental suffering may in so far as possible be eliminated.

The accident problem in this country today may be seen from data submitted in the *Twenty-fifth Yearbook of the National Society for the Study of Education* and from unpublished data of the National Safety Council: ¹

TABLE 16
ACCIDENTS IN THE UNITED STATES, 1924 AND 1930

	1924	1930
Total accidental fatalities	86,000	99,000
Motor vehicle fatalities	19,000	33,000
Other public accident fatalities	20,000	20,000
Home accident fatalities	29,000	30,000
Industrial fatalities	20,000 *	19,000 †
Total accidental fatalities (children under 15)	19,700	18,000
Motor vehicle fatalities (children under 15)	4,600	5,000
Non-fatal personal injuries	10,000,000	
Direct economic cost, approximately	\$3,250,000,000	

* Including 2,000 deaths which were also motor vehicle, and included under that heading.

† Including 3,000 deaths which were also motor vehicle, and included under that heading.

¹ *Twenty-fifth Yearbook of the National Society for the Study of Education*, The Public School Publishing Company, Bloomington, Illinois, 1926, page 1.

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According to the National Safety Council the causes of accidental deaths of children, listed in the order of their frequency, are: ¹

Automobile.	Poisoning by foods, animals, etc.
Conflagration and burns.	Traumatism by firearms.
Drowning.	Railroad.
Falls.	Vehicles (other than autos, trains, street cars and airplanes).
Suffocation and absorption of poisonous gas.	Street cars.
	Electric shock.

Origin of Safety Education. Safety education had its origin in industry. It was not until 1905 or soon thereafter that the industrial world began to develop a more humanitarian spirit toward its workmen. The *Twenty-fifth Yearbook of the National Society for the Study of Education* states that ²

the development of industry in the past few decades brought a large increase in the amount, power, and complexity of machinery and other manufacturing equipment, in the complexity of industrial processes, in the use of poisonous and other dangerous materials, and in the concentration of workmen. This caused a large increase in the number of fatal and other industrial accidents. Industry was developed from the standpoint of production, with little attention to the welfare of the human equipment. Industrial accidents were looked upon as a by-product, a price which had to be paid for industrial progress. Even the most humane employer generally thought he was doing his full duty and more if he gave a job as watchman to the man who had lost an arm in his employ or if he gave a few hundred dollars to the widow. The flood of immigration furnished an inexhaustible supply of labor and the death or crippling of a few thousand non-English-speaking immigrants was seemingly not considered a particularly serious matter. Even when factory managers began the study of modern efficiency methods, efficiency was thought of in terms of the product only, with little regard to the workers. The old common-law defenses of "assumption of risk," "contributory negligence," and "act of fellow servant" made the recovery of damages by an injured workman tedious and difficult, and most industrial managers accepted this point of view.

¹ *Safety Teaching in the Modern School*, Education Division, National Safety Council, New York City, 1930, page 2.

² *The Twenty-fifth Yearbook of the National Society for the Study of Education*, Public School Publishing Company, Bloomington, Illinois, 1926, page 5.

Early in this century employers in industry began to discover that accidents were wasteful, that they slowed up production, and that breaking in new men was a troublesome and expensive process. "Efficiency" was becoming the watchword in industry. Foremen, employers, and others began to study their accidents to ascertain how they could most easily and most effectively be prevented. They soon came to the conclusion that "even though legally it might be negligence for a workman to put his hand into unguarded gears, nevertheless, the simplest way to prevent such an accident was to guard the gears."¹ This was the beginning of a program to seek out all of the danger points in industry that could possibly be guarded. To find the sources of danger of accidents and to guard against them became a part of the work of foremen, employers, and efficiency engineers. It soon became evident that speed of production, economy of production, and quality of product had all gained rather than lost because of fewer accidents in the mills and factories.

Almost any workman who handles a dangerous machine or who is responsible for its operation where an accident is likely to occur tends to become familiar with the machine and more or less careless in his work. It soon became evident to the men who were interested in the prevention of accidents to workmen in industry that there were large numbers of accidents due entirely to carelessness on the part of the workman or the foreman, or both. The cause of the accident, however, did not make it any less expensive either to the company or to the man injured. Employers in industry found that guarding the mechanical equipment of the machines, while it had aided greatly in reducing accidents, was just a first step in the program of safety for the employees.

The second thing that seemed necessary to them was a campaign of education, among the foremen and the superintendents first, and the employees in the mills, shops, and factories next. Gradually there came into existence in each large industry in the country a "safety organization, headed by a central safety

¹ *Ibid.*, pages 5-6.

committee composed of executives, which was made responsible for the general direction of the safety campaign.”¹ Usually a safety director or a safety engineer was appointed to study the situation, formulate a program of work, and to carry through the program including both mechanical improvements in machinery, and the education of superintendents, foremen, and workmen. Employers and employees were requested to report dangerous conditions and practices, and were invited to suggest improvements that would make for the larger safety of all people who worked in the organization. Signs, posters, mass meetings, and other methods were used to stimulate a larger interest in personal and group safety.

It was soon evident to industrial organizations that their safety campaigns were bearing fruit, and that the saving to the companies was much greater than the cost of their safety campaigns. The interest in safety education grew from year to year and spread from one industry to another. This larger interest in 1913 led to the formation of the National Safety Council as a “coöperative association serving as a clearing house of information and a medium for study and research.”² Workmen’s compensation laws came into existence, thus giving a tremendous impetus to the movement by fixing a part of the loss of time and earning power due to accidents as a direct charge upon industry. Conditions for workmen have improved remarkably since 1910. The National Safety Council is due a large share of the credit for this marked improvement. In 1925 the Council’s members included, in addition to other groups, over 3,000 employers of labor in manufacturing industries, public utilities, mining, construction, and other industries. In nearly all of these companies today safety is a well-organized and effective part of the program.

The industrial safety movement in the United States is now well-established in the large industries, but it has by no means

¹ *The Twenty-fifth Yearbook of the National Society for the Study of Education*, Public School Publishing Company, Bloomington, Illinois, 1926, page 6.

² *Ibid.*, page 7.

reached the thousands of smaller industrial concerns that it must reach if protection is to be extended to that great army of workers who need it. It is still common practice to pick up a daily paper and read of serious accidents to large numbers of workers in the industrial world. The ultimate goal of safety education is that there shall be "no serious accidents."

We are told that industries that have during the past decade attempted to carry through a program of safety education have accomplished a decrease of seventy-five to ninety per cent in accident frequency and that these same industries are starting out anew to cut in half the number of accidents remaining. If the thousands of smaller industrial units in America could undertake the program of safety education in the same fine way that the larger organizations have, undoubtedly the number of accidents in industry could be reduced to a number that would approximate the ultimate goal of safety workers.

Safety education has sometimes found it difficult to find a place in some industrial organizations. There are still men in industry who pride themselves on doing dangerous types of work and who enjoy "taking a chance." It has been a difficult problem at times to interest foremen and workmen in safety education. Gradually, however, safety is being accepted as fundamentally sound, and the man who is careless and negligent is no longer considered courageous. Carelessness and negligence, in industrial organizations today, do not meet with the approval of the workers.

In recent years safety education has become an important phase of the work of the schools. Particularly in the last decade have the public school systems in America, more especially in the large cities of this country, laid emphasis on a program of education that would contribute to the safety of all the children in the schools. The public schools have found strong allies for this movement in life insurance companies, state labor departments, industrial managers, and other organizations that are concerned with the preservation of human life.

What Is Safety Education? Safety education, as conceived by the men and women in public education, is "the training of children to avoid accidents to themselves and to prevent accidents to others."¹

The National Safety Council in a small bulletin published in 1930 says that

safety means something more than accident prevention—it means also conservation of all that goes to make life worth while—health, opportunity, and the material resources upon which life itself depends. Safety is the opposite of waste.

From still another point of view, safety education means teaching the child to adjust himself to our modern civilization. To travel the streets safely he must be alert of mind and body; he must know something of the way in which traffic is controlled and kept moving, and he must recognize the rights of others in the use of the streets. This is obviously in harmony with the goal of education accepted by many of our foremost schoolmen today—the ability to "live well together"—or, in other words, to adapt ourselves to the interests and rights of others and to the conditions of present-day life. Safety education is, therefore, not only a training in the prevention of accidents and in conservation, but it is also a part of the vital matter of learning to be a good citizen.

Three methods are being used most successfully in the teaching of safety in the schools. First, the teaching of safety in actual situations where the need for it is apparent. In such situations learning is bound to take place. Second, the injection of the subject matter of safety into the regular subjects of the curriculum. This provides opportunity for children to follow interests which lead into the more general aspects of safety, thereby greatly adding to their fund of information. Third, the organization of extra-curricular activities such as junior safety councils, school-boy patrols, and safety clubs. These activities present an opportunity for the child by taking part, to apply his knowledge to the advancement of others, thus assuring definite civic responsibilities.

While there are certain outstanding causes of accidents common throughout the country, the problem must be approached from its local significance. Local information on child accident records may be obtained from police and health departments, coroner's office, hospitals, state registrar of motor vehicles, local safety councils, or

¹ *Safety Teaching in the Modern School*, Education Division, National Safety Council, New York, 1930, page 4.

motor clubs. This information will largely determine the points of emphasis. When to local data is added available information on the general accident situation in the United States and in other countries, there is an abundance of vital, concrete material on hand.

Although the subject matter of safety has found an incidental place in the elementary curriculum for many years, there have been few efforts toward organization of the work. The teaching of safety is greatly facilitated when an outline or course of study is provided for the teacher. Such a course should be prepared locally in order to deal with local problems and to relate safety to the existing curriculum. The content of such a course should contain safety in the home, on the street, at school, in play; the prevention of fire; and civic protection. These topics are important to all ages, but the material should be graded in such a way that it will be adapted to the experiences of the children. Hence, the advisability of associating safety teaching with other subjects for each grade. In the process of growth, each course will take on new significance.

Safety instruction should begin with children of pre-school age and extend into adult life. It cannot begin too early. In the work of the kindergarten and primary grades this subject matter should be organized around the activities of children. Much material for language and reading will grow out of the interests and experiences of children in the home, in school, and on the way going to and from school.

The field of safety becomes richer as the child grows in experience and as exposure to danger becomes more frequent and varied. In the intermediate grades and junior high school there is abundant opportunity for an enrichment of the subject matter of the courses through safety materials. In the social studies through history and geography the safety movement may be traced in a study of man's economic and scientific development; in civics through the functioning of local, state and federal agencies. Informational reading and dramatic expression through play are excellent media for teaching English. In arithmetic, problems vital to every child and adult are before us when we study loss of life and property through accidents. Graphs showing comparative studies of accident causes and accident losses may be constructed.¹

One of the interesting items of information in connection with the safety movement is that accidents to children are decreasing, and accidents to adults are increasing each year.

¹ *Safety Teaching in the Modern School*, Education Division, National Safety Council, New York, 1930, pages 4-8.

Recent studies would indicate that the age of forty-five is probably the most dangerous age to adults in so far as accidents are concerned. The reasons given for this are many, but two of the most important ones are: first, when a man becomes forty-five years of age or perhaps a little older he tends to slow up in life and is not as alert as he once was, thus making him more susceptible to injury from accidents; second, the age in which we live has changed in the period of forty-five years. The things we learn to escape as children are no longer dangers in our paths as adults, and the dangers that exist to people of today are things that we did not learn to evade as children. As a result, the human being at forty-five is encountered with an entirely new list of dangers that he did not know in his youth. Recent studies would indicate that the most serious age, then, for accidental injury is not in childhood but just past the age of two score.

In the light of the growing number of accidents to adults it would seem that safety education might profitably be extended to the field of adult education. What is more important to the adult than his physical well-being? Upon the physical well-being of the wage earner in America depends the ultimate happiness not only of himself but of those dependent upon him. It is a safe guess that safety education will not stop in the future with developing in children the information and the habits that will prevent accidents to themselves and to others, but that it will be extended to adults so that in this changing civilization the adult may learn those things that tend to prevent injuries to himself and to society as a whole.

An interesting plan to prevent accidents by automobile drivers was inaugurated by the *Louisville Courier-Journal* and the *Louisville Times* in 1922. The plan of the organization was to invite all employers who operated motor vehicles to become associate members of the Club, and the drivers active members. The object of the Club was to induce careful driving on the streets of Louisville. Each driver who is not charged with an

avoidable accident for a period of one year receives a bronze medal attesting that fact. Those who drive for five consecutive years without an avoidable accident receive a gold medal. It is the duty of the associate member to keep the record of his drivers and report to the *Courier-Journal* and the *Times* at the end of the year. Upon this record as attested by the associate member the medals are awarded.

The number of bronze medal drivers has grown from 377 in 1922 to 993 in 1930. There were thirty-one gold medal drivers in 1926 and fifty-two in 1930. Undoubtedly an organization such as this is a great stimulus to safety.

The Need for Safety Education. According to the *Public School Messenger*, published by the St. Louis public schools, accidents took the lives of approximately 96,000 persons in 1928. Of this number, motor vehicles were responsible for 27,500, other public accidents 20,500, home accidents, 24,000, and industry, 24,000:

Nineteen thousand five hundred of the 96,000 accidental deaths were of children under fifteen years of age. Motor vehicles were responsible for 5,540 of these, whereas home accidents caused 9,020.

In recent years there has been a definite decrease in our accidental death rate for almost all of the common classifications except motor vehicles, but even motor vehicle fatalities show a decrease on the basis of death per 100,000 cars although the rate per 100,000 population shows a decided increase each year.

Fifty-eight per cent of all fatalities involving motor vehicles are pedestrians. Estimating the total drivers of the United States at 25,000,000 and estimating total casualties at approximately 977,500, one driver in every twenty-five "gets his man" each year. He either kills him or cripples him; and every automobile injury is a potential fatality. Less than ten per cent of all vehicular accidents occur at railroad crossings.¹

The following table gives some interesting information concerning all accidental deaths over the period from 1913 to 1927.

¹ *Public School Messenger*, St. Louis Public Schools, November 20, 1929, page 3.

TABLE 17

DEATHS BY ACCIDENT IN THE UNITED STATES, 1913 TO 1927 ¹
(U.S. Census Bureau Data)

YEAR	ALL ACCIDENTAL DEATHS	PERCENTAGE CHANGE FROM PREVIOUS YEAR
1913	82,518	+ 5.3
1914	76,971	- 6.7
1915	76,096	- 1.1
1916	84,838	+11.5
1917	90,116	+ 6.2
1918	85,149	- 5.5
1919	75,602	-12.1
1920	76,089	+ 0.6
1921	74,081	- 2.6
1922	76,474	+ 3.2
1923	84,547	+10.6
1924	85,628	+ 1.3
1925	90,351	+ 5.5
1926	92,110	+ 1.9
1927	93,078	+ 1.1
1928 *	95,963	+ 3.1

* Estimated from reports to the National Safety Council by twenty-one states and the District of Columbia, representing 48.7 per cent of the entire population.

The population of the United States is increasing annually. To understand, then, whether accidents are on the increase or the decrease in comparison with other years, another table has been prepared from data obtained from the United States Census Bureau on the deaths per hundred thousand population from 1913 to 1927.

A study of Table 18 indicates very clearly that the total accidents have shown a slight decrease, but that the automobile accidents have shown a steady increase from 1913 to 1927. With the enormous increase in the number of cars it is not surprising that the number of accidents from automobiles has grown. It is probable that the number would have been many times larger but for the excellence of the work in safety education through the public schools of this country.

To the person who has not made a careful study of fatal accidents in the United States the information concerning the causes of accidental deaths is astonishing. Automobile accidents rank at the top of the accidental fatalities in the nation today.

¹ *Ibid.*, page 4.

TABLE 18

DEATHS PER 100,000 POPULATION, 1913 TO 1927; ALL ACCIDENTS,
AUTOMOBILE ACCIDENTS, OTHER ACCIDENTS ¹
(U.S. Census Bureau Data)

YEAR	ALL ACCIDENTS	AUTOMOBILE ACCIDENTS *	OTHER ACCI- DENTS
1913	85.5	3.9	81.6
1914	78.7	4.3	74.4
1915	76.6	5.9	70.7
1916	84.2	7.3	76.9
1917	88.2	9.0	79.2
1918	82.3	9.3	73.0
1919	71.9	9.4	62.5
1920	71.4	10.4	61.0
1921	68.7	11.5	57.2
1922	70.0	12.5	57.5
1923	76.4	14.9	61.5
1924	76.4	15.7	60.7
1925	78.3	17.0	61.3
1926	78.7	17.9	60.8
1927	78.4	19.5	58.9

*Excluding collisions of automobiles with heavier vehicles.

Second to that come accidental falls, and next to that, accidental drownings. The following information concerning the causes of accidental deaths in the United States will prove interesting to a person who has not made a study of the causes of fatalities through accidents. (See Table 19, page 434.)

This information indicates clearly the need for greater emphasis on safety education throughout public schools.

Accidents in the Home. Few people realize that approximately one-fourth of all the fatal accidents in the United States occur in the home. According to information supplied to the National Safety Council there were approximately 100,000 persons killed in accidents of all kinds in the United States last year. As in previous years, automobiles brought about a larger number of accidental deaths than any other factor, while falls took the second largest toll. In the home, falls stand first in the

¹ *Public School Messenger*, St. Louis Public Schools, November 20, 1929, page 5.

TABLE 19

ESTIMATED FATAL ACCIDENTS IN CONTINENTAL UNITED STATES, 1927 AND
PRIOR YEARS—PRINCIPAL CAUSES ¹
(U.S. Census Bureau Data)

CAUSE OF ACCIDENTAL DEATH	ESTIMATED DEATHS IN			
	1927	1926	1925	1911
<i>All Fatal Accidents</i>	93,078	92,110	90,351	79,305
Accidental burns	6,669	7,224	7,131	7,226
Accidental drowning	7,991	7,418	7,221	8,815
Accidental falls	16,596	16,349	15,508	14,090
Machinery	2,326	2,477	2,616	1,960
Railroad accidents	7,549	7,824	7,582	12,177
Collisions with automobiles . . .	1,836	1,733	1,416	*
Other railroad accidents	5,713	6,091	6,166	*
Street car accidents	1,590	1,805	1,823	2,979
Collisions with automobiles . . .	521	517	557	*
Other street car accidents	1,069	1,288	1,266	*
Automobile accidents †	23,176	21,014	19,654	2,043
Motorcycle accidents	329	245	297	*
Total motor vehicle accidents ‡ . . .	25,862	23,509	21,924	*

* Not available for 1911.

† Does not include deaths in collisions between automobiles and heavier vehicles. Does not include motorcycle accidents.

‡ Includes collisions with heavier vehicles; also motorcycle accidents.

list of causes of accidental deaths. Approximately 25,000 people in the United States in 1929 died as a result of accidents in the home. These accidents were the direct results of falls, burns, scalds, explosions, asphyxiation and suffocation, poisons, cuts, and scratches. Safety education begins in reality with the parental instruction to the child in the home. Unless safety education is taken up by the school and continued through the school life of the child and on into adult education, accidents will continue to take an enormous toll in the United States of America.

"It is generally agreed today," according to the authors of the *Twenty-fifth Yearbook of the National Society for the Study of Education*, that "accident prevention, whether in the factory,

¹ *Public School Messenger*, St. Louis Public Schools, November 20, 1929, page 6.

on the street, or in the home, requires a combination of three things: mechanical safeguarding, or a safe environment; supervision, or law enforcement; and education. The last is the most important of the three and furnishes the necessary background for the other two.”¹

Education for Safety Prevents Accidents. Mr. Albert W. Whitney, Associate General Manager of the National Bureau of Casualty and Surety Underwriters, and Vice President in charge of Education of the National Safety Council, reports that the lives of six thousand children are saved annually, and accidents prevented to many thousands more, through the work of school teachers and policemen assigned to traffic duty near schools, and to the work of others who are active in safety work.

An idea of the effectiveness of the work of schools may be gained from the statement from the National Safety Council that from 1922 to 1928 the increase in accidental fatalities to adults was thirty-two per cent. During this same period, which according to Mr. Whitney is the exact period when intensive work in safety education was carried on in the schools, the deaths of children increased for the first two years and then steadily decreased, the net result being an increase of one-sixteenth of one per cent. If the deaths of children had increased at the same rate as those of adults, over six thousand more children would each year be losing their lives than is now the case. Safety education, then, seems to be saving the lives of more than six thousand children every year.

In Mr. Whitney's statement he adds that “In the case of motor vehicle fatalities for the same period, the increase for adults has been over 100 per cent and for children twenty-three per cent; the corresponding net saving of life in this field being over three thousand children's lives each year.”¹

The National Safety Council believes that similar reductions in the fatality rate among adults could be effected if the same means for educating older people were available. Recent ex-

¹ *The Twenty-fifth Yearbook of the National Society for the Study of Education*, Public School Publishing Company, Bloomington, Illinois, 1926, Part I, page 16.

periments in education have shown that adults have about as good learning ability as children.

It has been estimated that the number of fatalities from accidents in 1931 will probably exceed one hundred thousand, or one fatality for every twelve hundred people. Accidents in the United States today are said to be the greatest single cause of dependence and destitution. If this is true, it is necessary that all school systems in all communities shall initiate and carry through a program in safety education.

Further evidence of the effectiveness of this movement is revealed in the bulletin of the National Safety Council, *Safety Education*, published in September 1930. It is stated in this bulletin "Although there was a national increase of 10.8 per cent in automobile fatalities during 1929, this increase does not hold for the communities having safety councils under the direction of a full time paid manager. So striking is the influence of these organizations, that had the entire country been reached by activities as energetic and as successful as those carried on by the councils approximately 2,500 automobile fatalities would have been prevented last year.

"The data used covers two fifty-two week periods, one ending December 28, 1929, and the other December 29, 1928, thus covering approximately two calendar years. Seventy-eight cities of over 100,000 population are included in the Census Bureau reports, of which thirty-two maintain a community council affiliated with the National Safety Council and employ a full time paid manager. The other forty-six have no council or only a limited program depending on volunteer efforts.

"In the thirty-two community council cities there were 3,189 deaths in 1928 and 3,256 in 1929, representing an increase of only sixty-seven, or 2.1 per cent. In the forty-six non-council cities, on the other hand, there were 3,120 deaths from automobiles in 1928 but 3,701 in 1929, an increase of 581 deaths, representing an 18.6 per cent change. In both groups, the figures do not include deaths in the city of persons injured in automobile accidents occurring outside the city.

"The cities without councils, in other words, were considerably worse than the country as a whole so far as their 1929 automobile accident record is concerned, while the council cities were considerably better, having less than one-fifth as great an increase."¹

An analysis of student accidents as reported in *Safety Education* for September 1930, shows that during the last school year schools and school systems with an average enrollment of 282,000 reported to the National Safety Council a total of 5,397 accidents to pupils. There were fifty-one fatalities in these accidents. Of the fifty-one accidents that resulted in death, only two which occurred on school grounds were directly associated with the schools. Seven happened while the children were either going to or returning from school, twelve in home accidents, and thirty while children were at play away from school. The 5,346 non-fatal accidents are classified as follows:

In school buildings.....	774
On school grounds.....	1,085
Going to or from school.....	501
Home accidents.....	1,644
Other accidents.....	1,342

We are told that these accidents resulted in 17,813 days of absence from school, an average of 3.3 days per accident.

If school systems generally will study carefully all accidents and will teach children how these accidents may be prevented, it is not improbable that accidents to children of school age may be almost eliminated within the next decade.

The School Program of Safety Education. Almost every city of 50,000 or more inhabitants in the United States today has a definitely outlined program of safety education in its public schools. Unfortunately, rural America has not found it expedient to incorporate in its public school curricula a carefully planned safety program. Even a casual study of accidents outside of our large centers of population will indicate a need for safety education.

¹ *Safety Education, Bulletin of the National Safety Council, September 1930.*

If one single law of the road could be taught to all people in this country, namely, that pedestrians should always walk on the left side of the road and face traffic, the saving in human suffering due to accidents to persons walking on the highways would be worth all the effort that is necessary to incorporate this in our program.

As an illustration of the work that is being done in the public schools of one of the larger cities of America, small units are taken from the comprehensive program of the St. Louis public schools. The outline for safety education as presented in the *Public School Messenger* of April 30, 1927, for grade two in the St. Louis public schools covers eight pages of work. The outlines for other grades are as comprehensive as for grade two. Space will not permit taking more than a small sample from each grade.

SAFETY—GRADE II¹

Specific Objectives

To develop the habit of going up and down stairs properly.

To gain the knowledge of the proper handling of an umbrella.

Suggested Activities

Demonstrating the proper way of going up and down stairs.

Writing in safety booklet such slogans as the following:

“Better be careful than crippled.”

“Make haste slowly.”

Composing slogan for safety posters.

Demonstrating the following:

How to open an umbrella.

How to carry a closed umbrella.

How to carry an open umbrella.

Dramatizing children crossing a busy street on a rainy day.

Drawing a picture of a rainy day during a drawing lesson.

¹ *Public School Messenger*, Department of Instruction, St. Louis Public Schools, April 30, 1927, pages 18-19.

To develop the habit of practicing safety in the street.

Taking a walk necessitating crossing a street.

Dramatizing a busy street crossing.

Writing in a safety booklet safety slogans, such as the following:

"Look! Then cross."

"Obey the traffic law."

Composing original safety slogans.

Cutting out magazine pictures for safety posters.

Making safety posters during the drawing period.

Suggested Procedure

Discuss the proper way of going up and down stairs:

Walking, not running.

Keeping to the right.

Holding on to the banister.

Discuss accidents caused by carelessness on the stairs.

Discuss the reasons why it is necessary to carry an umbrella, and why it is better to wear a rain-proof cape or coat, and hat.

Discuss safety in the following situations:

In crossing the streets.

In obeying traffic signals.

In obeying traffic officers and school traffic monitors.

In play.

Desirable Outcomes

Direct:

Proper conduct on the stairs.

Indirect:

Appreciation of the need of caution on the stairs.

Direct:

Knowledge of the proper handling of an umbrella.

Indirect:

Willingness to handle an umbrella properly.

Direct:

Development of the habit of practicing safety in the street.

Indirect:

Appreciation of the traffic officer's services.

Teach the following rime:

"He who stops to look each
way
Will live to look another
day."

Invite the traffic officer to come
to school to talk to the children.

Teach the following as a mem-
ory verse in the language period:

"The city is so full of good
places to play
I am sure we should stay off
the street every day."

SAFETY—GRADE III¹

Specific Objectives

To develop the habit of sharing
the work of keeping the home safe.

Suggested Activities

Discuss the following:

Leaving matches where the
mice can get them.

Throwing matches away be-
fore they are extinguished.

Putting matches out of the
reach of small children.

Dangers of:

Tripping.

Leaving unclean cans or
bottles about.

Pulling a chair from under a
person.

Leaving nails projecting.

Leaving baskets or other objects
on the stairs or in hallways.

Sliding down the banisters.

Taking two or more steps at a
time on the stairs.

Leaving the doors half open.

Putting milk bottles or other
things on the window sills
above the street or above
passageways.

¹ *Public School Messenger*, Department of Instruction, St. Louis Public Schools, April 30, 1927, pages 26-28.

Picking up things lying on the floor.
Standing on rocking chairs or shaky ladders.
Airing the rooms of the house.
Caring for towels.
Washing dishes after eating.
Putting rubbish in the proper receptacles.
Putting ashes in the proper place.
Cleaning out accumulated rubbish in the basement or attic.
Preventing fires.
Writing short stories of the ways in which children can help make the home safe.
Illustrating the stories with drawings.
Collecting clippings.
Gathering pictures.
Writing safety slogans.

Suggested Procedure

Talk about the ways in which a child can assist in making the home safe.

Propound such questions as:

How does cleanliness affect health?

Why is it important to keep rubbish from accumulating in the basement, attic, or yard?

Why is it dangerous to pull a chair from under a person?

Why is it dangerous to leave things lying on the floor or stairs?

Desirable Outcomes

Direct:

Ability to make the home safe.

Knowledge of the ways of assisting in making the home safe.

Indirect:

Appreciation of a safe home.

Appreciation of the opportunities to be a good helper in the home.

Almost every large city school system has worked out teaching materials for safety education. The National Safety Council, some of the large insurance companies, some of the large corpora-

tions, and other agencies interested in safety have published materials that contain valuable suggestions for teachers. One publication that every school should have available is the *Twenty-fifth Yearbook of the National Society for the Study of Education*, Part I. It contains valuable data and excellent suggestions as to method.

It has been pointed out earlier in this chapter that automobiles are responsible for a larger toll of human life than any other single cause. Early reports indicate that approximately 33,000 persons were killed by motor vehicles in 1931. In the *Yearbook* referred to in the preceding paragraph interesting and helpful information on the prevention of automobile accidents is supplied.

HOW TO PREVENT AUTOMOBILE ACCIDENTS

1. *When You Are Walking*

Look both ways before you cross the street. See that the way is clear before you cross the street. In crossing, first "look left," cross to the center of the road and then look to the right. Watch also for cars coming around the corner. Decide when it is safe to cross and go ahead without hesitation.

Never run across the street. You can see better and stop more quickly when walking.

If you get caught in the traffic, stand perfectly still in the center of the road and let the cars go by until you have a chance to go on. Do not dodge back and forth; drivers will not know where to steer if you do not stand still.

Obey traffic signals. Obey the traffic officer at all times. He is there to make the street safe and to keep traffic going smoothly.

If a crossing has no traffic officer, watch the signal lights. When there is no signal, "be your own semaphore." If cars are coming, say to yourself, "Stop." If the way is clear, say to yourself, "Go."

Remember that people are apt to follow blindly where another leads, so don't lead others into danger by crossing at the wrong time.

Cross at street crossings only. Drivers expect people to cross at the crossing and look for them there. That is why it is dangerous to cross in the middle of the block, where drivers do not expect you.

Never go from corner to corner diagonally because you are sure to

get in the way of traffic on one side or the other if you do this. A black-board sketch will make this clear. Cross *with* the stream of traffic—not *against* it.

Stepping into the street from behind a parked car or moving vehicle is one of the most frequent causes of automobile accidents, because when you do this, you cannot see what is coming, nor can the driver of an approaching car see you. A sand-table model will illustrate the danger of this practice.

Cross at the crossing when the way is clear.

Hold your umbrella high. You cannot see when you hold your umbrella down over your face. Hold it up high. It is better to get a little wet than to get run over. Also, you are apt to injure other people's eyes when you hold your umbrella down low with the point forward.

2. When You Are Playing

Play in a suitable place. Streets are for people who ride; sidewalks are for people who walk; playgrounds, parks, yards, vacant lots or streets closed to traffic are for people who play. If there is no such place near your home, choose a quiet street and keep on the sidewalk as far as possible. But remember this—it won't hurt you to walk a few blocks to the nearest playground and you can have a much better time there than you can on the street.

Look out for traffic when chasing your ball, your hat, or your playmate. If your ball rolls into the street, if your hat blows off, or if the playmate whom you are chasing starts across the road, look out for automobiles before you follow. It is hard to remember to do this, but it is harder still to get run over.

Use your own legs. Don't hop trucks, street-cars, or other vehicles in city streets. You may be able to jump and hold on safely, but when it comes to dropping off, you are likely to find yourself in the path of an approaching automobile which cannot stop quickly enough to avoid you. And even if *you* can do it safely, think a moment about the little children who will want to copy you—and then decide not to do it.

If you hold on to an automobile, street-car or other vehicle when you are riding a bicycle or are on roller-skates, other cars may unintentionally crush against you. Also, your speed is usually greater when a car is pulling you than when you are using your own legs, so that you cannot control yourself so easily. And is not the driver of the car entitled to some consideration? It is not his fault if you get hurt when holding on to his car, but he will have an unhappy feeling of responsibility. It is not fair to hold on to a car just because you know he cannot see you.

Use hand signals when riding a bicycle. If you are riding a bicycle in the street, signal when you want to stop or turn a corner just as every automobile driver does.

Keep off the handle-bars of a bicycle. If you live in the city, don't ride on the handle-bars of a bicycle and don't let other people ride on yours. The person who is on the handle-bars hides what is coming from the person on the seat who has to steer. Do this only on unfrequented roads in the country, if at all.

Use your scooter, roller-skates, or express wagon on the sidewalk. The danger of being struck by passing vehicles is very great if you use these things in the street. It is so easy to forget to look out for automobiles. Stay on the sidewalk or find a really quiet street or playground.

Hook rides with your sled only in the country. This is a dangerous sport for the city and for the same reason that hopping trucks is dangerous. Do it only in the country and off the main highways. Get your father or some friend to let you attach your sled to his car.

See that your sled rope is strong and smooth, so that it will slide off easily when you want to stop, and long enough to keep you from bumping when the car stops. Do not tie the rope, but hold it in your hand so you can let go quickly if you need to.

Choose a good place to coast. A good place to coast is a slope away from any road or car track. If you must coast on a roadway, take turns with the other coasters in guarding each street intersection to warn of approaching cars.

Never coast where your sled will have to cross a railroad or street-car track.

3. When You Are Driving a Car

Drive carefully at all times. Reckless driving is not a demonstration of skill.

The best drivers are especially careful at dusk, when there is neither enough daylight nor artificial light to make objects easily distinguishable.

Slow up for all turns in the road. Blind corners are dangerous. When it is impossible to see what is coming from around the corner, be prepared to stop. Sound horn a short distance from the corner, as you approach.

When chains are necessary, put them on both rear wheels. The use of only one chain may cause an accident. Chains on all four wheels help the steering of the car.

There are ruts at the bottom of almost every hill. If you hit these ruts at too high a speed, you may lose control of your car.

Drive slowly at bridges or culverts.

When you try to pass another vehicle going in your direction, start turning out to the left at least 75 feet to the rear. If you get up too close, you cannot see what is ahead and you may turn directly in front of another car coming toward you. When you have passed a car, do not cut back into the road nor slow down too soon.

Always be careful when backing. Sound your horn three times, signal other cars, and look back (not ahead) to see where you are going. Mirrors are valuable at all times.

Keep your car in order. Brakes should be tested every day. Never drive a car when the brakes are not working properly.

The steering mechanism should be tested frequently, and adjusted when necessary by an expert mechanic.

Proper lubrication is essential.

Keep your windshields clean.

Keep your attention on driving. Do not try to carry on too much conversation when you are driving. Safe driving needs your eyes, both hands, and your undivided attention.

Know your state traffic laws and local ordinances. A copy of the state laws may be secured by applying to the secretary of state at the state capitol. Local ordinances may be obtained from the police department.

Learn and observe the rules of the road. Be courteous. Pass to the right of vehicles coming from an opposite direction. Slow moving vehicles should keep to the extreme right of the road.

Sound your horn and pass to the *left* of vehicles going in your direction.

Pass to the *right* of street-cars and vehicles traveling in the street car tracks.

Don't try to pass another vehicle going in your direction at intersections, on curves or on the brow of a hill.

At street intersections give the right of way to the car approaching from the right. Don't presume too much even when you have the right of way; perhaps the other person doesn't know it.

When stopping or parking a car, see that the right side is toward the curb. The wheels should be cramped to the right when parking on a down grade, so that the car cannot move accidentally. Set the emergency brake and put the car in gear before leaving it if there is any doubt about the emergency brake holding.

Do not stop your car within 15 feet of a fire hydrant.

Always signal when you expect to stop or turn.

Headlights should be adjusted so the beam of light will strike the roadway ahead and not shine in the eyes of approaching drivers. If your lights are not so adjusted, dim them when approaching another car.

Look out for railroad crossings. All railroad crossings are dangerous whether guarded or not; crossing bells are sometimes out of order, or watchmen or gate operators may be off duty.

Be especially careful at crossing where there is more than one track. Do not cross directly behind a train which has just gone by. Another train may be coming in the opposite direction on another track.

Careful drivers always slow down and shift into intermediate or low gear before driving over a railroad crossing. This practice practically eliminates the danger of your motor stalling on the track.¹

This is just an illustration of the type of material found in this volume and in numerous other publications on safety education. The information on "How to Prevent Street Car Accidents," "How to Prevent Falls," "Causes of Conflagrations," "Burns and Scalds and Their Prevention," "How to Prevent Accidental Drownings," "Miscellaneous Accidents," and a section on "First Aid to the Injured" are treated in the same interesting and helpful way in many pamphlets, periodicals, and courses of study.

Every teacher in every school in the nation should teach safety. It is an easy matter to procure information concerning accidents which will serve as a background for the work. If the teaching is to be effective, however, the teacher must know the types of accidents which occur locally that the children in her school must learn to avoid. Safety clubs aid in building safety habits. These clubs have proved to be effective organizations in the elementary schools and in the junior and senior high schools. The pledge of the Junior Safety Council as it is organized in the city schools of Rochester, New York, is:

I promise on my honor that:

1. I will work for the safety of others as I would want them to work for my safety.
2. I will try to be careful all the time, everywhere.
3. I will not take unnecessary chances of getting hurt, and will warn others against doing so.
4. I will do MY PART to help reduce the number of accidents this year.
5. All this I will do for the sake of humanity and the honor of my school.

¹ *The Twenty-fifth Yearbook of the National Society for the Study of Education*, Public School Publishing Company, Bloomington, Illinois, 1926, Part I, pages 26-31.

No school is too small to teach safety, and no school should be without one or more safety clubs. We must practice safety if we are to reduce to a minimum the economic loss, the mental anguish, and the physical suffering that result from accidents.

QUESTIONS AND EXERCISES

1. How do you account for the fact that the industrial world apparently did not become interested in safety education until well into the twentieth century?
2. Is it as necessary that the school teach safety education in the rural districts as it is in the city areas? Justify your answer.
3. Work out a set of rules for driving an automobile whereby you believe the most dangerous practices of driving could be avoided.
4. Is safety education primarily concerned with the building of habits? If habits that are built prevent accidents now, is there any danger that they may actually cause accidents twenty-five years from now?
5. Give arguments for and against compelling every automobile driver to carry liability insurance. Does insurance tend to make drivers careless?
6. Find as much information as you can on laws in other states that have been enacted with a view of preventing automobile accidents. In the light of this information, make recommendations whereby the traffic laws in your own state might be bettered.
7. Think over your school days in the elementary schools. What were some of the most dangerous practices in which you engaged?
8. Of what business is it to society if a home owner chooses to climb upon a ladder that is unsafe? What principle is involved here?
9. Find out what your state is doing to prevent fire hazards? Check the premises around your own home and see if you find any conditions that might cause a fire.

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XIX

EDUCATIONAL GUIDANCE AND VOCATIONAL EDUCATION

Choosing a Vocation. One of the biggest problems for any young man or woman today is the choice of a vocation. The census of 1920 listed more than 6,000 occupations in which a wage earner might find employment. It is said that twenty-five per cent of the people who are working in gainful occupations today are working in occupations unknown twenty-five years ago. That means that new occupations are coming into existence all the time.

A great deal of attention has been given in recent years to the counseling of young men and women concerning the occupations in which they may find satisfactory employment. Every boy and every girl would like to discover the calling into which he can fit best and where he will be able to succeed in the largest way. Every teacher, every parent, and every counselor would like to help boys and girls to find the occupations in which they can be happy and through which they can serve best. Educational and vocational guidance have been of great worth in aiding young men and women in the choice of a life calling. Counseling these young men and young women is not as easy as one might suppose. Vocations and professions are not as definite and as simple as we often think. The United States is a nation of 123,000,000 people. There is room for an enormous variety of interests and activities in almost every calling, provided a man has certain underlying traits of mind and character. It would be difficult to imagine any kind of talent that could not be used in this, the wealthiest nation in the world. Guidance is a new movement in American education. It has

grown up so recently that there is still a wide divergence of opinion as to the best method of counseling and as to the best bases of choices.

Boys and girls want to know and should know the qualities that are essential to the successful worker in industry, to the successful business man, or to the successful professional man. More and more the persons interested in guidance are coming to believe that if a boy or girl has a deep interest and unusual ability along any line it is wise for that individual to make that interest the basis of his life work. There is a place for every person in our civilization if that person will prepare himself thoroughly for the work he desires to do.

Suppose, however, that an individual does not have a special bent. Suppose that the young man or young woman has never found a deep abiding interest in any single occupation. It is a safe assumption that the majority of young men and young women do not discover before the completion of a high school education a permanent interest in any calling. It is said that Theodore Roosevelt, Woodrow Wilson, Benjamin Franklin, Leonardo da Vinci, and other notable men and women did not discover early in their lives the things they wanted most to do. As a matter of fact, most boys and girls do not possess unusual ability. They possess the qualities of becoming good citizens who will contribute to the good of civilization in proportion to their abilities. Some authorities have estimated that more than fifty per cent of all the young men and young women who are enrolled in the colleges of America have not definitely chosen a life calling. It is not a serious matter for young men and young women to put off choosing an occupation provided that while they are delaying they are continually laying a stronger foundation upon which to build later; but so often this is not true.

More and more, authorities in the field of guidance are realizing that a good general preparation is fundamental to successful living. It was not as necessary for men and women to have a broad general education a half century ago as it is today. Com-

petition was not as keen in the latter part of the nineteenth century as it is in the twentieth. Andrew Carnegie began work with only a grammar school education in the middle of the nineteenth century and amassed a fortune in industry. B. C. Forbes in his *Forbes Magazine*, in analyzing the large executive positions filled during the year 1930, says that it is becoming less and less usual for a tremendously responsible position to be awarded to a man of meager education. Mr. W. W. Atterbury, President of the Pennsylvania Railroad, in a speech some time ago said that the great executive positions in American industry in the future would be filled almost wholly by college trained men. High school education and college education did not make as much difference in the nineteenth century as it does in the twentieth. The young man or young woman starting life today who fails to procure a thorough general education will be handicapped throughout his future.

Guidance has also taught us that it is desirable that boys and girls shall eliminate the callings which are not suited to their interests and capacities. We have learned that it is a waste of time to allow young people to spend time exploring occupations in which they do not have the ability to succeed and for which they are not temperamentally fitted. We have learned that it is important to discover the occupations in which we cannot succeed.

Psychologists tell us that young men who possess high ability may succeed as well in one profession as in another, provided temperamental factors do not prove a handicap. For instance, we are told that a young man with unusual ability may succeed about as well in medicine, law, business, teaching, engineering, or any one of a number of other professions, if he possesses the personal qualities necessary to success in that profession. Some young men of course find it extremely difficult to make the proper adjustments in the field of medicine because they cannot stand seeing people suffer. It makes them faint and weak to see human suffering. There are persons who could never become successful in the field of medicine, particularly

as surgeons, because of this quality. Others could never succeed in the field of teaching or in salesmanship because of a retiring personality. All good teachers must have enthusiastic, stimulating personalities. It is essential that they meet people easily and make friends quickly. They must win the confidence of the pupils and the good will of the community if they are to succeed in this profession.

Advertising—another of the rapidly growing fields—requires a peculiar fitness by nature plus a long and exacting training and actual experience. One is dealing with new inventions, new improvements, new developments, and new creations of all kinds. He is in fact selling through the written rather than the spoken word. The man who would succeed in this field must know almost as much about the business of the firm or corporation for which he works as the executives in that organization know about it themselves. He must be able to write in a way that will attract attention. He must understand the psychology of human nature. A man or a woman who does not possess these qualities and abilities will find it difficult to succeed in this field.

Some of us are not fitted for a type of work that is growing in prominence in educational organizations and in industry—namely, research. Research demands an individual of good ability, of keenness of perception, who is free from prejudices, and who does not let his personal opinions influence his findings. A salesman or an advertising man would rarely be a good research man because he is working with human relationships rather than with exact ideas. Some of the great teachers in our large institutions are not good research men, and some of our great research men in universities and colleges who are contributing in a remarkable way to the progress of the world are not counted as among our best teachers.

What are the factors, then, that should guide a young man or a young woman in selecting a life occupation? Among others these thirteen will help any young person if he studies them carefully:

1. *Will you enjoy it?* Will your work become an absorbing passion? There is nothing more depressing to any individual than being compelled to go to work day after day at uncongenial tasks. The man who finds pleasure in his work is the man who gets the greatest joy out of life. The best work is only possible from men and women who thoroughly enjoy the things they do.

2. *Is it a healthful vocation?* Health is the most important item in the budget of life. You have frequently heard people say that they were not in business for their health. Every person should be in business for his health. He should strive to obtain a satisfactory occupation in a physically favorable environment so that his work will not in any way undermine or destroy his health.

3. *Is it an occupation worthy of your best efforts?* Does it serve society? Will your work bring to you each day a feeling of helpful service? Everyone likes to have his work appreciated. The man who is engaging in illegal pursuits, even though the financial rewards be great, can never obtain that satisfaction that comes from doing useful, helpful work.

4. *What are the financial rewards?* Past? Present? Future? We should investigate carefully before we choose. Take neither the lowest nor the highest returns as an index to the rewards that may be expected. It is safer to get the lowest and the average and to base our choice upon these than to expect returns at the highest level. A very few ever obtain the highest financial rewards to be gained in any occupation.

5. *Is the occupation now crowded or is there a good chance of getting started to advantage immediately?* Some of us must begin work immediately after giving ourselves the preparation for any task. Most young people who enter any occupation will be underpaid for a certain period of time, but if the occupation offers an opportunity for a living wage until one can demonstrate his worth and can be assured that the financial rewards will be satisfactory after he has proved his ability, then he has no complaint.

6. *Does the occupation offer freedom and opportunities for*

leisure? Freedom is measured by the margin between one's income and one's expenditures. Life cannot be filled with real satisfaction unless there is freedom and leisure. Leisure can only be acquired by concentrated effort. Will the occupation leave time and money for good books, good magazines, for travel, and for those things that make for happiness and for contentment?

7. *Will it allow you time at home, or must you be away from home a great deal in your work?* This may not make very much difference to a young man just starting in life, but what difference will it make later in his life when he has a home and children?

8. *Will there be a position available when you have given yourself the training necessary?* If the occupation is now overcrowded is it worth while to give yourself the training, even though you like the work, and take a chance on getting a job? If there is an occupation that you like almost as well and it is not overcrowded, your common sense and your good judgment may show you the desirability of going into the other occupation, even though it does not seem to you that you will enjoy it quite so much.

9. *Is the training that you will need available to you?* For instance, if you are interested in medicine you should know that the road is a long one through college, through the medical school, and through the internship in a hospital. It is long and expensive. If misfortune has left you not only without means but with the support of a mother or some brothers and sisters, it may mean that it is unwise for you to attempt this long difficult road to your chosen profession. Perhaps there is another occupation where the rewards are satisfactory and where the training is less expensive in time and in money that you will enjoy almost if not quite as much.

10. *Will this occupation give you the social contacts and the types of associations that will make life interesting and happy?* Happiness in life depends in large measure upon the types of people with whom we come in contact. All other things being equal, a young man or woman will be happiest where he can come in contact with desirable associates.

11. *Will this occupation take you into the localities where you will enjoy living?* Certain types of engineering, for instance, might take one into pioneer communities where life would be more or less primitive. If one enjoys this type of life there is no reason why he should not give himself the preparation that will take him there. If on the other hand he does not desire to go into communities of this kind he should stay away from this type of profession.

12. *Will this occupation offer permanence and opportunities for advancement?* Both of these are necessary if one is to obtain the largest satisfactions in life. One likes to feel that he is engaged in a work that is lasting and that has permanent values. He also likes to feel that there is an opportunity for growth. Generally speaking, an individual will work a little harder when there is a chance of advancement.

13. *Is it a desirable position for old age or is it a young man's job?* This is closely related to the preceding. Driving a bus or serving as a bell boy in a hotel may be interesting occupations for a certain length of time, but into what kinds of occupations will they lead ultimately? Is it going to be necessary for you to change your occupation if you accept a young man's job?

All of these things we must study carefully. After we have eliminated the callings in which we think we will probably succeed least well, and after we have chosen that one in which we think we may best succeed, it is desirable that we stay with the one occupation that we have chosen unless there is a good reason for a change. If we find that we are on the wrong road, if good reason for a change is evident, there is just one thing to do and that is to start again in a new type of training for a new or related type of occupation. As soon as we can settle definitely upon a chosen occupation we should persistently stick to our choice and give ourselves the best preparation possible for that calling. Restlessness has always been common among young men and young women. It is characteristic of youth. Many boys and girls drift about from one job to another constantly seeking the one that will continue to be interesting.

There seem to be some people in the world who will tire of any job. They never seem to find the one occupation that is satisfying. Such an individual should strive to compel himself to be interested by long, hard work. Some of us have to develop interest when we fail to discover it.

There is no reason for discouragement because we may not have chosen a vocation by the time we are out of high school or even by the time we are half way through college. We certainly should have made a choice before we complete college. Generally speaking, the last two years of high school, for those who are not going to college, should be used in procuring the preparation necessary for a chosen occupation. For those who go to college, undoubtedly at least the last two years of college should be spent in vocational training unless college is used as a basal training for medicine, law, or some other one of the professions and for which graduate training is necessary.

Women are finding places for themselves today in many of the professions formerly controlled by men. In 1834 in Pennsylvania, approximately ninety per cent of the teachers were men and ten per cent were women. By 1924 practically ninety per cent of the teachers were women and only ten per cent were men. Architecture, interior decoration, tea room service, cafeteria management, landscape gardening, and many other of the occupations formerly monopolized by men, have a strong appeal today for women with ambition and ability.

What occupation shall I choose? What curriculum shall I select as a basis of training for the occupation of my choice? If you do not enjoy the work of the curriculum there is slight chance that you will ever enjoy the work of the occupation. Hundreds of young men in engineering colleges have been heard to say, "I shall be glad to get out of this mathematics, this physics, and all this other work and get into engineering" and all the time the persons who heard them were wondering whether these young men who were not getting a good foundation for engineering would enjoy the profession or would ever succeed in it. Young men and young women who are preparing to be

teachers sometimes grumble and complain about the work of practice teaching. Others have expressed themselves as delighted to have the opportunity to learn how to teach through practice. They enjoyed it. Which of the two groups will probably be the more successful teachers?

In the long run you should choose that preparation in high school or in college that will bring to you the largest returns in satisfaction, in adjustment, and in happiness. One of the most important factors to be considered in determining one's choice of an occupation is one's estimate of future success in this occupation. There are many types of work which demand ability and personal qualities that one does not possess. Every young person should study himself to ascertain whether or not he possesses the qualities that will enable him to succeed in any line of endeavor. Vocational choices are made on many bases. The most frequent reason given by young people today for their choice of vocation is that father or some relative was engaged in this occupation. The second most important reason for choice has been contact with the vocation after school or during vacations.

One of the unfortunate things in life is that thousands of young men and young women cannot come in contact with the occupations that they should know and understand. They have too limited a knowledge as a basis for choosing. Generally speaking, it is true that one's interest is probably the safest guide for him to follow when deciding upon a program of work in preparation for an occupation. It is unfortunate that so many thousands of our young people cannot have an opportunity to know more about occupations and callings that are open and cannot have larger contacts with them before making decisions. Vocational information courses can do much to correct this situation.

School systems are finding the use of tests unusually helpful in guiding boys and girls in their work. The general interests of the student, we shall assume, may be safely used as a basis for a high school curriculum. General ability tests may then

be used to assist in predicting the success of the pupil in his choice of curriculum.

Two boys may express a genuine interest in agriculture. They may thoroughly enjoy contact with farm problems. One may be a gifted boy and the other may be a boy of only average intelligence. The gifted boy may go through high school and may complete his program in the college of agriculture, and may some day become an eminent scientist, contributing to the development of the whole field of agriculture. The other boy may do well to complete an effective program of vocational agriculture in high school and become a successful farmer in the community. This is not a suggestion that the gifted boy should not become a farmer. He has an opportunity, however, to give a far larger service to agriculture by giving himself the additional training in order that he may be able to serve in a larger way.

Two boys may show technical interest. One boy may become an expert automobile mechanic, the other may become a Steinmetz or an Edison. Boys of limited intelligence have academic and technical interests just as well as boys of greater intelligence.

Men and women who counsel boys and girls concerning the choice of a life occupation should be well informed concerning trends and opportunities in the occupations of life, and they should know the abilities and the aptitudes of the boys and girls they are advising so that they may counsel wisely and well. In the last analysis they must allow the individual to make the choice. It is the duty of the counselor to help him discover new sources of information and to procure new experiences so that he may make his choice in the light of the best information and the best experience possible.

In the larger city school systems in America, organizations have been set up to assist boys and girls in the choice of a curriculum and an occupation. Altogether too little has been done in the smaller school systems of the country. It has been felt by school administrators and by teachers that the small

school system could do very little in the way of guidance. There is no system too small to provide some type of information that will be helpful to young men and young women. Vocational information and a study of occupations is possible in any school. Information concerning trends in occupations can be procured by teachers in the smallest school systems and can be used advantageously in working with boys and girls. Pennsylvania was the first state in the Union to provide a guidance program on a state-wide basis. What Pennsylvania has done is possible in the other forty-seven states. It is not necessary, however, to have a director of guidance in order to accomplish worth while things in this field for the boys and girls who are enrolled in the public schools of America.

Vocational Education.—*What is vocational education?* Is it essentially different from what is usually called general education? Defined in its simplest sense, vocational education is that education given for any wage earning occupation which one chooses to follow.

If one avails himself of a special type of training to become a bricklayer, a plasterer, a painter, a cabinet maker, a machinist, or to qualify himself for any one of hundreds of other occupations he is availing himself of vocational training. If one follows a curriculum in law, in medicine, in engineering, in commerce, or in professional preparation for teaching, to qualify himself for work in that occupation, he is definitely and specifically following a curriculum preparatory to a definite calling and for him it is vocational.

Interpreting the whole field of education on a liberal basis, almost any subject included in the curriculum today may have general or vocational value. For instance, if a student pursues a program of training in Latin preparatory to teaching Latin in the public schools of this country, Latin for him is a vocational subject. If, on the other hand, another student takes training in this same subject to give himself a larger appreciation of literature and a cultural background, the subject does not have vocational value to him, but has general value. It

would be difficult to imagine any subject that might not be taught on such a basis that it might have either general or vocational values. Agriculture, for instance, is usually considered a vocational subject. To thousands of students in America who never expect to follow agriculture as a vocation, it may be studied from a different standpoint, and it may have for them general or cultural value.

One group of people in American education tries to define vocational education on a narrow and restricted basis. Another group of men and women interprets it on a broad and liberal basis. Unfortunately, there has been in the past a good deal of discussion about vocational and cultural education. It has been assumed that vocational education was the arch enemy of culture. There is at the present time, and perhaps always will be, a group of people who are always worrying for fear that the world will lose its culture. They are afraid that the present emphasis on vocational education will rob the world and civilization of that finer something which they are pleased to call cultural education. In a meeting in a southern state in April 1931, a speaker stated that the only salvation for education was to be found in the cultural education provided in the liberal arts colleges. It is probable that the long argument about vocational and cultural education would have ended long ago if the proponents of either of these so-called types of education had understood each other more clearly.

Is it not true that any subject is cultural, that any subject contains liberalizing values, if it gives one an understanding of the problems of life, if it makes one open-minded, if it tends to develop in one those qualities of character that are appreciated and enjoyed by his associates and if it enables one to earn an honest living and to make use of his leisure time for the good of society? To be a good citizen in a democracy one must be able to earn his living. He must be able not only to support himself but to support those dependent upon him. Any education that fails to give one the ability to do this is a failing education. Many of the subjects for which great cultural

values have been claimed may be taught so as to make them very narrowing. It is safe to say that those subjects afford most culture which most vitally touch life's interests. All men and women who think clearly will agree that everyone should lay for himself the broadest educational foundation possible before specializing in his life work. His educational foundation will, of course, depend on two things: first, his native ability; and second, his opportunities for acquiring the education that he desires.

It would seem that the ultimate purpose of education should be to enable everyone to appreciate more fully the work he does and to obtain the maximum of pleasure from his work, regardless of whether it may be classed as general or vocational education. There should be cultural values in every skilled trade. Such occupations as carpentry, plastering, cabinet making, house painting, calcimining, and frescoing, all involve art factors and all of these develop appreciation on the part of skilled workmen. Some of these appreciations may be elementary, but they are appreciations just the same. The cabinet maker derives a keen pleasure from having done a superior piece of work. The man who calcimines the walls of a room likes to do his work so well that it pleases him and brings a word of praise from his employer.

Mr. A, a graduate of an agricultural college, is a nurseryman. He has a keen sense of love of the beautiful in trees, in flowers, and in shrubs. His plants all but talk to him, as Luther Burbank's plants did to him. Mr. B is a professor of English in the university from which Mr. A was graduated. He might be led among Mr. A's trees and flowers and shrubs all day long, but he would never really see them. He sees beauty only in English literature, and there is beauty in that for him. Mr. A makes his living in developing and growing plants for people who love them. Mr. B makes his living teaching English literature. Do not both of these men have culture, and yet is it not of a different type? Do not the gardeners who look after the big estates in Westchester County, New York, have a sense

of the beautiful in landscape gardening? Is it probable that the owners of those estates enjoy their flowers and trees and shrubs any more than the gardeners? Is it not probable that the men who know most about them, the men who understand them best, have a keener sense of appreciation of the beautiful than the men who merely look at them and enjoy them? It is very doubtful whether there is any vocation that does not render some sense of enjoyment of the thing done, however lowly that vocation may be.

The program of education in our country. In the few pages that may be devoted to vocational education in this book it will be impossible to do more than touch briefly upon the program in the United States. The first legislation providing funds for vocational education purposes was the passage of the Morrill Act in 1862. The Morrill Act provided for the establishment of an agricultural and mechanical college in each of the states of the Union. This Act has stimulated the growth of higher education in agriculture and in engineering in all of the states. The provisions of the Morrill Act have been enlarged through subsequent legislation, including the Hatch Act of 1887, the Second Morrill Act of 1890, and the Nelson Act of 1907. It was further extended through the Smith-Lever Act, providing for work in agricultural extension, the agricultural colleges in the several states and the United States Department of Agriculture coöperating. This Act has been interpreted on a very liberal basis, and under its provisions has grown up not only extension work for adults in agriculture and home economics, but the whole club work program as sponsored through the several state institutions coöperating with the United States Department of Agriculture.

The piece of legislation that has had the most far-reaching effect on vocational education below the college level was the passage of the Federal Vocational Education Act, commonly known as the Smith-Hughes Law, in 1917. Under the provisions of this Act moneys were appropriated for work in agriculture, industry, and home economics. A Federal Board was created

to administer the provisions of the Act. This Board was to be made up of the secretaries of Agriculture, Commerce, and Labor, the United States Commissioner of Education, and three other citizens of the United States, one representing manufacturing and commercial interests, one agriculture, and one labor. The three appointive members of the Board were to be named by the President of the United States by and with the advice and consent of the Senate. The Federal Vocational Education Act provided that the Federal Board for Vocational Education "shall have the power to coöperate with the states in carrying out the provisions of the Act." It provided further that it should be the duty of the Board to make or cause to be made studies, investigations, and reports bearing upon vocational education in agriculture, home economics, and industry and commercial pursuits, with the view of stimulating and improving education in these fields. Although no moneys were appropriated directly to commercial education under the provisions of this Act, the Act did provide for studies in the field of commercial education in order that this work might receive an added impetus, and the guidance and direction that could come from supervision and from research.

The Smith-Hughes Act was further extended through the passage of the George Reed Act in 1929. This Act provided additional sums of money amounting to \$2,500,000 for vocational agriculture and vocational home economics.

The effect of the Smith-Hughes Act on individuals enrolled in vocational education in the United States may be seen from the fact that in 1918, the first year that the Smith-Hughes Act was in force, 15,450 persons were enrolled in vocational agriculture. In 1930, 12 years later, 188,311 persons were enrolled in this work. In 1918, 99,338 persons were enrolled in courses in trade and industry. In 1930, 618,782 persons were enrolled in these courses. In 1918, 30,799 persons were enrolled in vocational home economics. In 1930, there were 174,664 persons enrolled in the work.

The Act not only provides for funds for training in the voca-

tions of agriculture, home economics, and industry, but it provides that a certain portion of the funds may be used for training teachers in these fields. In 1918 ninety-four institutions received funds to assist in training teachers in these three fields of work. In 1930 this list of institutions had grown to 163. The number of persons enrolled in vocational teacher training courses, federally aided, in 1918 was 6,589, and in 1930 was 20,736.

The total amount of money spent for vocational education in 1918 was \$3,039,061.15, while in 1930 the amount spent was \$29,909,295.87. Of the total amount spent in 1930 only \$7,404,223.18 was federal money, while \$8,233,148.77 was state money, leaving a total of \$14,271,923.92 in local money that was spent on vocational education.

It may be clearly seen from these figures that the purpose of the Federal Vocational Educational Act is being realized. The original purpose of the Act was not to provide funds to pay for vocational education. It was the original purpose of the Act to stimulate vocational education in the states of the Union and to assist in some measure in providing for this education.

In 1920 Congress passed the Civilian Rehabilitation Act, providing for the vocational rehabilitation of persons disabled in industry and their return to civil employment. This Act is commonly known as the Smith-Fess Act. It provides for coöperation with the states in the rehabilitation of persons who have been injured in industrial pursuits. During the year 1930 more than 4,500 disabled persons were rehabilitated and were placed permanently in some wage earning occupation by state agencies operating in coöperation with the Federal Board for Vocational Education. At the end of the same year more than 20,000 disabled men and women were in process of rehabilitation in the different states. In 1929 Congress passed an act extending the provisions of the Civilian Vocational Rehabilitation Act to the District of Columbia, and in 1930 nearly 500 disabled persons, ranging from fourteen to fifty years of age, were reported to the Federal Board for Vocational Education for rehabilitation purposes.

One of the problems vocational education must face in the future is the reëducation of persons who have been thrown out of employment because of the introduction of labor-saving machinery. Before this program is undertaken it will be necessary to make careful studies to determine opportunities for future employment. It will also be necessary to study each person carefully to determine his capacities, his interests, and his aptitudes. This means that vocational education must be more closely allied to guidance. It is true that vocational education should begin where guidance ends, but it is also true that additional guidance is needed when workers find themselves out of employment with no prospect of procuring work in their vocations.

If the nation would promote a program of adult education, including both general and vocational education, for all persons out of employment who could be persuaded to avail themselves of the opportunity, two things would be accomplished: In the first place, men and women would have an opportunity to procure training that would make them more proficient in their chosen calling, or they might use the opportunity to qualify for a new type of work. Secondly, they could use the opportunity to broaden their mental horizon through courses of a more general nature, thus preparing themselves for better citizenship and a fuller and richer life. They would thereby be increasing their opportunities to use their leisure time pleasantly and profitably. If the leisure time of idle workers could be used to better advantage much of the crime in the nation could be prevented. It is probable that if a small amount of the \$14,000,000,000 a year that now goes to pay for crime could be spent in adult education, it would far more than justify the added expenditure.

In summary, then, it may be said that most people are fairly well agreed that vocational education should be built upon the best foundation in general education that is possible for the individual. This is today a fairly well-accepted part of our educational philosophy.

In vocational education there has been a definite attempt to bring the instructional program into close relation with the occupation for which training is being given. This has insured practical and helpful training and an individual who will be qualified to undertake the work for which he has been trained. A large part of the program of vocational education is a program of improving the individual while he is employed. The individual who has entered upon an occupation is decidedly more interested in a program of training than one who is getting ready for a job. This type of vocational education elicits the best response from persons in training. There has been, and still is, a confusion as to the fields covered by vocational education. From the standpoint of federal legislation, it would seem to cover work in agriculture, home economics, trades and industries, and commercial education, below college grade. All of the occupations for which college training is required would seem to have achieved the honor of being called professions. Medicine, agriculture, the ministry, diplomatic service, teaching, nursing, and all of the other long list of occupations for which college training is necessary are, in the eyes of the educational world, professions. The education that prepares one for an occupation whether it be a trade or a profession is vocational education.

It is a part of the philosophy of vocational education that the youth and the adult population of the nation should not waste time or money pursuing courses of training that cannot result in an enlarged point of view and in greater proficiency in one's chosen occupation.

Dr. Charles A. Prosser, in a forecast and prophecy concerning vocational education in *Objectives and Problems of Vocational Education*, says, "It is the main business of vocational education to help citizens in every stage of their careers, over the risers from one job to the next job ahead. Just as the pusher engine helps laboring trains over difficult grades, so should vocational education serve men at the points where they are in difficulty, where they need assistance to 'make the grade' in their

efforts to improve their efficiency and thus secure advancement."¹

In predicting the future of vocational education, Dr. Prosser lists the following as fundamental:²

1. The occupation will be studied to learn what are its demands on workers in skill and knowledge.
2. Those demands in skill and knowledge, which workers can learn to meet satisfactorily on the job itself, will be left to be learned on the job.
3. The minimum demands on new workers at the time of entrance to the job, whatever they are, will be met by the help of the school.
4. Those demands which they cannot learn to meet satisfactorily on the job will be met by the help of the school.
5. The teaching content of the school for the occupation will be made up of these demands and of the experiences in skill and knowledge—in doing and thinking—which are necessary to prepare the student to meet these demands.
6. The acid test for all the experiences given to such a student by the school will be whether or not they equip him to meet these demands. Any experiences that do not, have no place in the course of study.
7. Since the demand upon the student is an ability to do something, then the acid test, to put the matter another way, will be whether what is taught increases his ability to do it, remembering that ability to do requires both the ability to think what to do and the ability to execute what should be done.
8. The progress of the student will be measured not by the length of time he has been exposed to training by the school or by marks and credits, but by his ability to do as determined by practical test.
9. Whatever skill he is taught will be skill demanded by the occupation, and whatever knowledge is taught will be the knowledge that must be used in the occupation to get the work done.
10. As functioning knowledge is what is required, all the knowledge in every field which bears on this occupation will be culled, organized, taught, and used in the training, and only that knowledge. Only the mathematics that is used in this occupation

¹ Lee, Edwin A., *Objectives and Problems of Vocational Education*, McGraw-Hill Book Company, 1928, pages 441-442.

² *Ibid.*, page 443.

will be taught, and, likewise, only that science and only that drawing will be taught. Similarly, only those "shop kinks" or "office kinks" or "home kinks" or "farm kinks" that function in the occupation will be taught.

11. The experiences in skill and knowledge which make up the content of the training for the occupation will be organized so as to set up, in the most efficient way, the progressive steps in learning to meet these demands.
12. The training will be given by those who have themselves had successful experience in meeting the same demands.
13. The final test will be whether those who have been trained are able to meet these demands.

QUESTIONS AND EXERCISES

1. Is it more essential that we give educational guidance today than ever before? Why?
2. Distinguish between vocational guidance and educational guidance. Which is the more important?
3. List the qualities which you possess that in your opinion will aid you in becoming a successful teacher.
4. Would it be well to require every student in college to take a course in vocational guidance? Justify your answer.
5. What are the advantages in deciding early in life what one's vocation in life will be? Is it just as important that girls decide early as it is for boys? Justify your answer.
6. Which subject is more cultural, Latin or agriculture? Mathematics or typewriting? Why?
7. There is apparently a strong sentiment against federal aid in schools in general. How then do you account for the Smith-Hughes Act?
8. How do you distinguish between general education and vocational education? What relation should exist between the two?
9. Will ethics among business men be on a higher plane as a result of vocational training? Explain.

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XX

THRIFT EDUCATION

What Is Thrift? When one mentions the subject of thrift in the program of education, the majority of people think of financial thrift. Thrift in the past has been applied in large measure to the saving of money, which is a most desirable type of thrift teaching. But this is only one of the many kinds of thrift that should be encouraged and taught in the public schools of the nation and the world. All children should learn the value of saving health, energy, time, and all those other things that tend to make for happiness and successful work. Thrift today is taught in connection with practically every subject in the public school program. It is taught in connection with citizenship, English, arithmetic, household arts, and industrial arts. Children are taught thrift in the conservation of materials in the school and at home. The public schools have realized the need of teaching thrift in many fields of endeavor; but in all of this teaching they have been careful to distinguish between thrift on the one hand and selfishness and penuriousness on the other.

Thrift as it is understood today is the "habit which prompts one to work for what he gets; to earn what is paid him; to invest a part of his earnings; to spend wisely and well; to save, but not to hoard." ¹ It helps one to choose between the things that have temporary values and those whose values are permanent.

Origin and Development of Thrift Movement in United States. The first school savings bank seems to have been established at Beloit, Wisconsin, in 1876. The school commissioner of Long Island City established a system of school savings

¹ *Thrift Captain Talks and Stories*, School Savings Division, Los Angeles Public Schools.

banks in that school system in 1885. These pioneering efforts attracted favorable attention but the movement made little progress as a part of our public school program prior to the San Francisco Exposition in 1915. The International Congress for Thrift held a meeting in connection with the San Francisco Exposition at that time. Among the men who appeared on that program were the late Dr. David Starr Jordan, President Emeritus, Stanford University; Mr. S. W. Straus, President of the American Society for Thrift; and Mrs. Phoebe Apperson Hearst, a widely known philanthropist. Prior to that meeting little attention had been given to thrift education save by individuals here and there over our country. The public schools had done very little in the teaching of any phase of thrift education. As a consequence, the practice of thrift as it is understood today had not become general. The International Congress for Thrift in San Francisco so stimulated the movement in this country that Dr. Robert J. Aley, then President of the National Council of Education, appointed a committee to study the problem and to stimulate proper instruction in thrift in the public schools. This was in reality the beginning of a nationwide program to teach the boys and girls in the public schools in this country the great lesson of the proper use of time, money, and materials.

The development of the program has been slow. Superintendents, school boards, and school administrative officers have moved cautiously, but they have moved forward. In the beginning the emphasis was primarily on school savings banks and children were taught to save their pennies, nickels, and dimes. This was valuable to the boys and girls of the nation, and thousands of children developed the habit of saving who had never acquired it before.

As the years went by the program was expanded to incorporate more than saving money. At the present time we have a program of thrift education that teaches the conservation of personal and national resources, the saving of health, and the wise utilization of time and energy.

One of the outcomes of the movement was the formation of the American Society for Thrift. This organization published in 1928 a bulletin on thrift education which outlines in careful detail the work to be undertaken in thrift by years. There is included in the bulletin an eight-year program. Teachers will find this a most helpful publication and will find the suggestions practicable and useful.

Importance of thrift. "There is nothing more important in the development of your children than inculcating in them a real spirit of thrift. Aside from the financial independence that may be expected for the girl or boy who understands true thrift, parents may be sure that the children who acquire thrifty habits early will never go far astray. Every form of wrong doing violates some rule of thrift. The child with thrift instincts will very early discover that to do wrong is to waste—either time, money, health, or property. The thrifty child's dislike of waste will be a powerful influence toward doing right."¹

There are so many practical phases of thrift education that have a strong appeal to children that it is difficult to see why all teachers do not attempt to give some work in this field. Thousands and thousands of children start to high school without knowing whether they will attend college, but with an earnest desire to attend college if an opportunity presents itself. If a boy or girl starts a saving program in his early years it is far more probable that he will find it easier to go to college when the time comes than if he never attempts a thrift program.

Thrift does not mean saving every available cent at the expense of comfort and health. It does mean that every item in the budget of life be used in the way that is productive of the most permanent good. Thrift must be understood as the best use of time, money, and materials. The thrifty child is that child who has learned to control his expenditures properly. He learns to place definite values on different things in life and he is willing to forego temporary pleasures for more lasting pleasures. If the habit of thrift could be well fixed in the lives

¹ *Thrift Instruction in Our Public Schools*, a pamphlet, Los Angeles Public Schools.

of all people in this nation, it is probable that another period of depression such as the country has gone through in 1930 and 1931 would never again occur.

The teacher and thrift. The teachers in the United States of America have been slow to teach thrift in all its phases in the public schools. This is probably the result of a failure on their part to understand the significance of the movement. Teachers do not ordinarily teach a subject that they have not been taught, and the institutions responsible for the training of teachers in America have not incorporated thrift teaching in their programs to any considerable extent. As a matter of fact, thousands of teachers in this country have not learned to practice thrift in its widest and finest sense. The nation as a whole, however, has learned to practice it to some extent. It was reported that at the close of 1930 the United States had more than twenty-eight billion dollars in savings banks. The health of the people of this country has practically been doubled in the past century. We are becoming more careful of the use of our time and the conservation of our resources. We are as a nation learning to save our health, our energy, our time, and our means.

Thrift must be taught through the curriculum. If thrift means this much in the careers of individual men and women in the world it is important that thrift education be incorporated into the curricula of schools all over the land. We have known for a long time that if we desire to have certain habits and skills carried over and made a part of adult life, they must be learned early and must be practiced consistently. If we would have children learn thrift in the conservation of their energy, in the conservation of their time, in the conservation of materials, and in savings, we must begin teaching it early in the school life of the child. If thrift is to be taught in schools there must be a carefully outlined program of exactly what is to be accomplished in each grade and by each teacher in each grade. Unless the school has a well-defined program of work that is understood alike by the teacher and the child, it is not likely that the objectives of the program will be achieved. It is nec-

essary, therefore, that the pupils, the teacher, and the administrator of the organization shall all understand what is to be accomplished in each grade. It is also necessary that each teacher shall understand what was to have been accomplished in the preceding grade so that there may be a unified program of work. In other words, the entire program of thrift education must be integrated and there must be no chance for children to acquire those habits that will undo what has been done through previous training.

It is unfortunate that the public schools in the United States have assumed that thrift would be learned incidentally and that it was not necessary to teach it as a part of our public school program. The American people are often accused of being wasteful. We have never been considered a thrifty people. Certainly this nation has squandered its natural resources in a shameful way. If the problems of thrift education had been properly understood by our forefathers, and if the children of the United States of America had received adequate instruction and had been given a proper understanding of a sound program in this field, it is highly probable that this nation would have conserved in a more sensible way the great heritage that our forefathers found when they came to this continent.

Who is the thrifty individual? There has been a tendency in the past to criticize people who taught and who practiced economy. Too frequently they have been called mercenary, miserly, and close-fisted. The man who was wasteful of money, time, and materials, too often was looked upon with favor. We understand clearly today that this was a result of an improper type of education, or a total lack of the right kind of education. It shows clearly that we failed to understand the spirit and purpose of the saving of our time, our health, our energy, and our means. A thrifty person is neither miserly nor selfish. A proper understanding and practice of thrift does not consist in selfishly hoarding treasures on earth. It is the purpose of real thrift to teach one not only how to save but how

to spend wisely. It enables one to place proper values on health, time, materials, money, and other things in life.

The Effect of Thrift on Character. The practice of thrift furnishes the basis for the highest type of character training. All children should be taught "the dignity of labor, the moral and economic value of earning and saving, reasons for the elimination of waste, the need for health and strength, the proper employment of the leisure hour, and the necessity for conserving our natural resources."¹

In Birmingham, Alabama, the slogan for the school year 1930-31 was "The Development of Character through Thrift." A special effort was made to conserve school supplies—soap, crayon, pencils, paper, and other materials—and to care for textbooks that are furnished free in that city. Birmingham did not, however, neglect thrift in other fields. It emphasized also thrift in savings, and in many schools in the city one hundred per cent of the children were depositors in the Birmingham banks. The total amount saved and on deposit in the school savings bank at the end of the school year was in excess of two hundred thousand dollars.

In recent years superintendents of schools have realized more and more the effect of thrift teaching on character. Superintendent H. J. Gerling of the St. Louis public schools, in a school publication called *School and Home* says,²

with the inauguration of the St. Louis school savings system it is appropriate to call attention to the fact that the practice of thrift is a wholesome influence upon the development of character. The amount of money saved by our boys and girls, considerable though it may be, is less important by far than the training in time economy and income management which the savings system offers to the pupils who participate in it. The participation is voluntary; but because of the wholesome and far-reaching effects of the regular weekly savings deposits it is suggested that all who can possibly do so, make use of the opportunity thus presented.

¹ Chamberlain, Arthur H., *Thrift Education*, The American Society for Thrift, New York City, 1928, page 5.

² *School and Home*, The Department of Instruction, St. Louis, Missouri, April 1930, page 2.

In the school room, thrift is correlated more or less with other subject matter contained in the curriculum. Pupils are learning through instruction, observation, and practice that the good things of life—the joy of the spirit and the happiness which come from the ability to serve well and generously as citizens—are not the necessary concomitants of inherited wealth or position; our pupils are learning that these may be acquired through proper habits of living, through the exercise of foresight, of application, and of character. These are the qualities which a proper use of the school savings system should tend to promote.

The Boys' and Girls' Clubs of the Roosevelt High School in Seattle adopted a "Thrift Creed" which seems worthy of quoting in this volume. They give ten reasons for their belief in the habit of saving. The more one studies the thrift program the more evident it becomes that thrift does have a definite relationship to character formation.

THRIFT CREED ¹

We believe in the Habit of Saving because—

1. It is the foundation of a strong character in that it builds up self-denial, will power, and self-confidence.
2. It promotes the growth of individual industry and responsibility.
3. It calls for intelligence in spending and results in scientific management of one's personal affairs.
4. It develops forethought and removes one of the greatest causes of worry.
5. It establishes for the thrifty person a reputation for intelligence, diligence, and dependableness.
6. It puts one in line for the best positions.
7. It enables one to seize business opportunity when it comes.
8. It secures greater and better planned pleasures.
9. It makes one a benefactor to society, not a beneficiary.
10. It assures national stability, prosperity, and happiness.

If thrift could only teach every individual to plan carefully his entire life program, it would accomplish a great goal. There is nothing more important in life than procuring the

¹ *School and Home*, The Department of Instruction, St. Louis, Missouri, April 1930, page 2.

kind of work that one will enjoy, that one can do best, and that is sufficiently remunerative to give him a good living and to provide for the years when he will be too old to work. Educational guidance and thrift should work hand in hand to determine the work that is best suited to the individual and to assist him in laying out a life program. Every pupil should acquire the habits, the attitudes, and the skills that will enable him to succeed best in his chosen field, and then he should plan definitely to save a part of his income every year of his working life if it is possible to do so. The management of one's income is just as important as one's ability to do his work well. Very few people in the world become extremely wealthy. It is not expected that any considerable number of the boys and girls in the public schools today will be wealthy men and women tomorrow. The object of thrift education is not to make large numbers of people wealthy, but to make all people economically independent. It is the fundamental purpose of thrift teaching that every individual shall be self-supporting and that he shall save enough to take care of himself and those dependent upon him in old age. The majority of people in the United States earn relatively small salaries. The only hope that they have of providing "a good standard of living and of accumulating money is by careful management of their incomes—systematic saving of some part of all they earn, and well-planned and thoughtful spending of the balance." ¹

Thrift often prevents want and suffering. Economic conditions in the United States change periodically. Large numbers of workers are out of employment in every economic depression. It has been estimated that as many as 6,250,000 wage earners were out of employment at one time in the economic depression of 1930-31. Poverty, want, and suffering were found in practically every city in the nation, largely because the working men and women of the United States had not learned how to save and had not learned how to spend wisely. When wages

¹ *A Tentative Syllabus in Economic Citizenship*, The University of the State of New York, 1929, page 12.

are high and work is steady there is a tendency on the part of most people to live beyond their means, and to violate the principles of thrift and sound economy. It is the problem of public education to counteract this tendency toward extravagance through the encouragement and practice of those habits of economy that will enable the individual not only to live within his means, but to save enough money to tide him over periods of depression.

Forty-one of the larger cities of the United States have introduced school savings systems through Educational Thrift Service, located in the Woolworth Building, New York City. These forty-one cities on June 30, 1930, had on deposit for the pupils in their schools \$13,749,339. There were numerous other cities in the nation with school savings systems that were not working through Educational Thrift Service. In commenting on the system, Dr. Willis A. Sutton, superintendent of Atlanta schools, said, "I believe that the banking system which we have inaugurated under the direction of the Educational Thrift Service has been a great factor in our character education program. We have on deposit something near two hundred thousand dollars, and have from sixty to seventy-five per cent of our students making weekly deposits. Just what this will mean in the development of their character and to encourage them to do real banking in the years to come is doubtful to say, but I am sure the influence will be far-reaching on their economic status as the years come and go."

The St. Louis schools have worked out a table that shows how money will grow if deposited regularly.¹ (See Table 20.)

The ultimate object of any savings system in any school is to teach habits of saving and thrift. Emphasis is never placed on the accumulation of large sums of money, although many pupils have accumulated large bank accounts through the practice of saving. All pupils are encouraged to participate regardless of the amount they deposit each week. Some children can

¹ *School and Home*, The Department of Instruction, St. Louis, Missouri, April 1930, page 8.

TABLE 20

HOW MONEY GROWS WHEN DEPOSITED REGULARLY AND COMPOUNDED
AT THREE PER CENT

WHAT YOU WILL HAVE AT END OF	WEEKLY DEPOSIT							
	5¢	10¢	15¢	20¢	25¢	50¢	\$1	\$2
1 yr.	\$ 2.64	\$ 5.28	\$ 7.92	\$ 10.56	\$ 13.20	\$ 26.40	\$ 52.80	\$ 105.60
2 yrs.	5.35	10.71	16.07	21.43	26.79	53.59	107.19	214.38
3 yrs.	8.16	16.32	24.48	32.64	40.81	81.61	163.23	326.46
4 yrs.	11.04	22.09	33.13	44.18	55.24	110.48	220.96	441.90
5 yrs.	14.02	28.04	42.06	56.08	70.11	140.22	280.44	560.89
10 yrs.	30.29	60.59	90.88	121.18	151.47	302.95	605.90	1211.80
15 yrs.	49.18	98.36	147.54	196.72	245.90	491.80	983.61	1967.21
20 yrs.	71.09	142.19	213.28	284.38	355.49	710.97	1421.95	2843.91

deposit dollars ever so much more easily than others can deposit pennies, but the child who can deposit not more than a penny a week, and does so, is learning the habit of saving just as thoroughly as the child who deposits the larger sum. The purpose of the whole program is to establish the habit of thrift and the amount accumulated is not the concern of the school so much as it is the concern of the home.

Theodore Roosevelt once said, "Extravagance rots character. Train your youth away from it." That, in essence, is the purpose of thrift education. If "thrift is the best means of thriving," and if "economy is half the battle of life," then surely thrift should not be incidental in our program of education. It should be an integral part of the work of our schools.

Thrift habits result in

The conscious budgeting of leisure time.

Saving of time and energy.

A nation physically fit.

Earning and saving.

Wise investments.

Intelligent spending.

Concentration of effort.

Talents wisely applied.

Conserving natural resources.

USE WITHOUT WASTE.¹

¹ Chamberlain, Arthur H., *Thrift Education*, The American Society for Thrift, New York City, 1928, page 55.

Children Enjoy Learning and Practicing Thrift. Children enjoy learning and practicing habits of thrift, both at home and at school. A wise parent will encourage children to save and to share their savings with needy children and worthy causes. They will get genuine pleasure from intelligent giving and will learn habits of generosity as well as thrift.

Many school systems encourage each room in the grades to prepare boxes of food, clothing, and toys for homes that are in need of comfort and cheer at the Christmas season. The pupils thoroughly enjoy giving pleasure to others in this way. They learn to save in order that they may contribute to the happiness of others. They develop attitudes, ideals, and habits that make them better "little citizens" and that will tend to make them better citizens in adulthood.

Thrift teaching offers splendid opportunities for creative work in school. Children enjoy writing thrift rhymes, thrift songs, thrift posters, thrift slogans, and thrift plays. Virginia Marshall, a pupil in the Grant School in Los Angeles, wrote the following rhyme which is a type of work done by children wherever thrift is taught.

A THRIFT RULE

A penny saved is a penny earned,
A lesson remembered is a lesson learned,
So save, and study and soon you'll see
How happy a thrifty child can be.

Pennies make nickels and nickels make dimes,
And dimes save you worry and trouble sometimes,
So when you grow up you'll be glad to know
That you'll reap a good crop from the thrift that you sow.

Thrift offers opportunity for coöperation between school and home. Thrift education offers an unusual opportunity to bring the home and the school into closer contact. Almost every parent can be interested in a program of thrift for his children. The time has come when the school must concern itself with this problem. Parents and teachers have an opportunity to study the child, his nature, and his needs more carefully and to develop a happier working relationship for the good of the pupil concerned.

Thrift teaches caution in business. Not all the experiences of school systems that have engaged in financial thrift have been happy ones. There are many instances where schools have inaugurated savings programs that have not resulted in a satisfactory way. For instance, about twenty-five years ago the Pittsburgh Bank for Savings established a School Savings Department, for the systematic collection of funds of the children of that city. The children of the schools responded to the work in thrift and by 1915, they had approximately \$250,000 deposited in the Pittsburgh Bank for Savings. These funds were not secured in any unusual way. The bank closed its doors and the depositors were threatened with a very considerable loss. Mr. Henry C. Frick, a wealthy citizen of the city of Pittsburgh, guaranteed the accounts of the school children. Fortunately, the bank was able to make payments in full and it was not necessary for Mr. Frick to make good his guarantee. This fact, however, does not detract in the least from Mr. Frick's generous action, since there was no assurance at the time the bank closed its doors, that he would not be required to make good the entire amount of the school deposits.

For several years thereafter, Pittsburgh had no school savings in any of its schools. In the fall of 1921, the school savings accounts were reorganized under the direction of the Educational Thrift Service, Incorporated, of New York, and the Union Savings Bank of Pittsburgh became the depository. Before the Pittsburgh Board of Public Education would allow the bank to receive any such accounts from the school children, they required the bank to deposit with another bank collateral covering the entire amount of the deposits. The only collateral acceptable are government and municipal bonds which are taken at the market, dollar for dollar, and high grade bonds having a ready market in New York City and which have not defaulted in either payment of principal or interest for a period of at least ten years. On bonds of this character, the deposit of one dollar in collateral at the market, is held as security against each seventy-five cents deposited by school children.

Under these conditions, school savings in Pittsburgh have been growing rapidly until the school savings deposits of this city were \$2,046,000 in January 1931. To secure this, the Union Savings Bank, depository, had deposited with the Union Trust Company of Pittsburgh, as trustee, government and municipal bonds in the amount of \$2,120,000. The Pittsburgh school children are, in so far as the authors can determine, the only children in the country who have their school savings deposits secured in such a manner.

School administrators and teachers have, as a result of some unfortunate banking experience, become wiser and much more careful in teaching financial thrift. School boards and parents have taken a larger interest in the program and have been careful to avoid the unhappy experiences that certain school systems in America went through in the early years of the program. It is safe to say that thrift education in our public schools has been fully as helpful to teachers and school administrators in many instances as it has been to the public school children of the land.

Thrift teaches promptness in business. If one has learned the lesson of financial thrift one has learned the lesson of promptness in meeting one's financial obligations. The person who pays his bills promptly is always able to maintain better credit relations. He increases his self-respect and he practices the golden rule in business. If all persons met their bills promptly, bills probably could be considerably reduced. Somebody always has to pay for the man who does not pay at all. The cost of sending out second and third notices is always expensive, and somebody has to pay for this. If all people learned to pay their bills when the bills came due, the cost of operating the business of the world would be greatly reduced and the cost of commodities to those of us who buy would be considerably less.

Many homes have been left destitute because some man failed to pay his insurance premiums promptly. It is not an uncommon thing for a man to allow his policies to lapse through failure

to pay premiums, and as a consequence those dependent upon him are frequently left with almost no means of carrying on. It is the purpose of thrift education to teach individuals to pay every bill contracted promptly, and to contract no bills that cannot be paid.

Thrift teaches foresight in business. One of the fine things that thrift education does in our public schools is to teach young men and young women the value of insurance and the value of making a will. It teaches pupils to look ahead in the program of life and to anticipate the problems that may arise in one's career. Most people learn the value of insurance early in their lives. Altogether too few people ever learn the necessity of making a will. It is the purpose of thrift education to teach these things to pupils in public schools. Children learn that making a will is a moral obligation, that it reduces legal expenses to heirs, that it gives the individual an opportunity to divide his estate as he desires, that an estate left without having been disposed of through a will causes annoyance and needless expense, and that it is a common sense proposition for every individual to provide for the distribution of his estate through a will properly drawn by an individual who understands how to make a will. Making a will is just as important as having a deed for a piece of property that has been purchased. The pupil in the public school learns that the usual procedure in making a will is to consult the trust officer of one's bank, or a reputable lawyer, or both. He learns that a reliable person must be named as administrator. He learns that a strong bank is a wise choice as the executor of one's will. Needless distress and grief will be averted through a proper procedure in drawing and executing one's will.

Thrift education, therefore, teaches not only how to save, how to invest, but it teaches foresight, honesty, and justice. Any program of thrift education that is well planned and well executed will leave the children in the public schools of the nation in better position to meet life's problems as a result of proper teaching of this subject.

QUESTIONS AND EXERCISES

1. What does thrift education mean to you?
2. How early in the grades would you recommend a program of thrift education?
3. A committee of bankers met with the board of education and stated that the expense of handling the school savings deposits was too great to permit of a continuance of the program. What arguments would you advance to justify the program?
4. Outline a program of thrift education for the grade you expect to teach, or for a high school thrift club, if you expect to teach on the secondary level.
5. You are teaching your first school. You desire to initiate a program of thrift education. Your superintendent tells you that he feels that you should stick to fundamentals and let the frills alone. How would you reply to him?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

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Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XXI

RESEARCH AND EXPERIMENTATION

There have been three methods used in the past in the discovery of truth. The first method used was that of authority. When questions arose they were settled by consent or force. When kings ruled by divine right this method of settlement was not so bad. Life was relatively simple and scientific methods of investigation were not well known. Today, however, force and majority vote as methods of settlement are not always conducive to best results.

A second stage reached in the settlement of truth was that of speculation. Speculation is largely carried on by discussion and is considered a distinct improvement over the authoritative method of solution. The greatest trouble in the speculative method is the tendency to wander astray and probably arrive at conclusions which are not sound.

The third stage reached in the determination of truth is that of scientific research. It is only recently that we have been able to lay claim to a science of education, and yet today there are a number of writers who doubt whether the technique used in educational research is sufficiently scientific to enable us to call education a science. However this may be, there are thousands working in the field of education at the present time who are doing what they call educational research, and it is to this subject that attention will now be turned.

What Is Educational Research? This question has been answered by Walter S. Monroe as follows:¹ "The ultimate purpose of all educational research is the discovery of procedures,

¹ Monroe, Walter S., and Johnston, Nell Bomar, "Reporting Educational Research," *University of Illinois Bulletin*, Volume 22, Number 38, 1925, page 8.

rules and principles relating to the various aspects of education. Critical reflective thinking is required in which discovered facts and principles may be utilized, as well as original data. Thus the answering of any question about education by means of critical reflective thinking, based upon the 'best' data obtainable, may properly be called educational research."

A careful study of the above quotation indicates that in educational research one is attempting to find procedures, or rules, or principles which relate to education. The method used in the discovery is that of reflective thinking applied to original data or other discovered facts and principles. If this is educational research there seems to be no specific reason for believing that it must be carried on only in the laboratory, or to be more specific, that it could not be carried on by the teacher under normal schoolroom conditions.

From a practical standpoint one may think of educational research as, (1) a study of the existing situation; (2) a selection of the findings of one or more particular weaknesses to be studied; (3) a suggested remedy for the weakness; and (4) a tryout of the remedy suggested.

It appears, then, that since educational research is an attempt to discover the truth in education, anyone who would engage in educational research should not only recognize the truth when he sees it, but he should also be interested in seeking it. In discussing the research worker, one writer states:¹

The competent research worker in education is one who can recognize truth when he sees it and who knows how to proceed to find truth in regions hitherto unexplored. To recognize truth when one sees it does not imply the possession of some occult power of truth discernment; it means the mastery of detailed processes of analysis, the possession of definite standards of judgment, and friendly familiarity with the materials and methods, including their limitations, that are used in establishing knowledge in a particular field.

According to this same writer every well-trained research worker should possess: (1) A basic naturalistic philosophy.

¹ Bay, James C., "The Training of a Research Worker in Education," *School and Society*, March 5, 1927, page 274-275.

- (2) At least one year of mathematical analysis on the college level. From such knowledge one should be able to see how things should depend on each other, how they vary, and how a change in one affects a corresponding change in the other.
- (3) One year of statistics, with emphasis upon statistical analysis, taught through critical appraisals of educational research work.

From this it would appear that few teachers could qualify as careful educational research workers. There are a few authorities in the field of education, however, who believe that teachers not only can do research work but also should be encouraged to undertake research projects in connection with their work.

The Teacher and Research. The question of whether the teacher in the ordinary classroom should attempt to carry on research is very much in dispute. There are those who believe that the technique of research and especially that type of research called experimentation is so difficult to administer and so complex that the average teacher who attempts to use it is likely to get erroneous impressions. Others believe that with a little training in experimentation a teacher can, if she desires, attempt research projects that will throw much light on better methods of teaching and also serve as a check on the extent to which the findings in the laboratory will work under normal classroom conditions. Undoubtedly there are a number of arguments that can be advanced in favor of the teacher's attempting some research work. Among these are:

One can have actual schoolroom conditions. The results that are obtained will be found in connection with actual schoolroom conditions. This is a real argument in favor of research work, provided the conclusions drawn are correct. It is probable that when one takes adult students in a university laboratory and finds that when nonsense syllables are pronounced they learn better by the whole method than by the part method, it is too much to conclude that the same results will be obtained with children and sense material under normal schoolroom conditions. It may be true that adults with a certain intelli-

gence and a certain reading rate can double their speed of reading by taking six weeks of practice work, but does it follow that a sixth grade class of boys and girls of average intelligence and a certain reading rate can make similar improvement in the public school where an average teacher is in charge? In the past, most of the research findings in education have come from the universities where special conditions were set up, but of late this is not true. Many cities of the better type have within the past few years established research bureaus within their own schools, where all research work done is in connection with the normal schoolroom conditions. In addition to this, much of the educational research work carried on in the university today is being done out in the field. Teachers, principals, and superintendents by the score are at present collaborating with the university authorities in carrying out research projects in the elementary and secondary fields where the normal classroom conditions exist. It follows that the more the research bureaus, both in the city and the university, attempt to undertake research projects in connection with the classroom and with the help and coöperation of the teacher, the less need there will be for the teacher to undertake her own research projects. Doubtless all will agree that it is better to carry out research projects when the teacher is participating in the activity with the research expert than it is for either of them to carry on the work alone. Such a policy gives the practical touch through the contribution of the teacher, and it assures expert analysis and conclusions through the contribution of the research worker.

One can test conclusions under an unlimited number of conditions. The conclusions drawn from research projects carried on in the university laboratory are usually based on certain controlled conditions. The conclusions drawn may or may not be true when the conditions are varied. Therefore, when the results are rechecked or the experiment is repeated in the schoolroom where the conditions are of all types, one can establish some criterion as to how applicable the results are under other conditions than those of the laboratory. In other words, the

classroom permits an opportunity for confirming the findings of the psychologist or educationist in the laboratory, and since every schoolroom differs from every other, the number of conditions under which the conclusions can be tested is unlimited.

It has the advantage of an unlimited number of subjects with which to deal. The research worker in the university laboratory always has a limited number of subjects with which to deal. If he wishes to know what poems children like best he is necessarily limited by the number of children he can use for experimentation. If he wishes to know the effect of learning curves as an incentive in learning, the chances are that he will have to try it out on a limited number of adults rather than an unlimited number of children. To what extent, then, his conclusions will be in error when applied to much larger numbers of subjects he can only estimate. The limitation of numbers, however, does not exist in the classroom. If one wishes to experiment to find where certain materials should be placed in the grades, it is a relatively easy matter to get 100,000 or 200,000 children, if need be, for subjects. Moreover, when one goes to the classroom with his experiment the number of teachers who can participate in the work is almost unlimited. The value of an unlimited and unselected group of subjects for experimentation and for checking the conclusions of the psychologist or educationist has been expressed by one prominent research worker as follows:¹ "The general answer, which psychology often attempts to supply, has in some instances little bearing. It requires modifications this way or that according to the conditions; and these conditions are much more numerous and divergent than any psychological laboratory can set up. There effects can only be determined when a great many learners are available for observation—learners using various types of procedure and exhibiting different stages of maturity, levels of intelligence, and degrees of effort—learners working on various kinds of tasks under various incentives and with various

¹ From *Research for Teachers*, with the permission of the author, B. R. Buckingham, and the publisher, Silver, Burdett and Company.

purposes in view." As Buckingham well points out, some of the very important conclusions drawn by psychologists have been based on but few subjects. Binet, who is always associated with the intelligence test movement, "wrote an important book on intelligence, but he secured the material for it from but two persons."

The teacher grows through a participation in such activities. Regardless of the amount of training teachers have had prior to beginning their teaching experience, there are but few who have learned how to spend their time efficiently. They have not learned to use data in a way to draw conclusions. They have not learned the importance of indexing and filing materials which they collect. They have not learned that it is more important to find things when needed than it is to learn things and then forget them before they are needed. All of these weaknesses will tend to be overcome by the teacher who is always engaged in a research project. If one is carrying on a problem in research he has an attitude of looking for materials and articles that will bear on the problem. He will automatically become a diligent reader of educational periodicals. He will soon learn the importance of a card index file so that the contents of articles will be taken down in written form, whereby they may be carefully classified and preserved. The teacher who participates in research will learn to read rapidly, to skim new books, to enter footnotes, to quote her authority in written statements, and a hundred other things that characterize the student attitude. Finally, the teacher who participates in educational research will grow in openmindedness. She will avoid the rut and the habit of shutting out everything that is new. She will not be one of those who believe that because a certain method of learning or technique of teaching has been followed for the past fifty years, it cannot be bettered. She will not only be sympathetic to, but also appreciative of, the different methods used by other teachers. Such a teacher will not work by the hour. Her work will be so absorbing to her that it will not be time but results only that count. The rewards should

not be merely more efficient work but a work accompanied by greater joy and satisfaction.

Not all the arguments, however, are in favor of the teacher's acting in the capacity of a worker in educational research. Those who believe that it is the teacher's business to teach and not to attempt to carry on research projects, advance the following arguments:

Teachers are not skilled enough in techniques of research and therefore are likely to draw erroneous conclusions. That this is generally true of teachers as they exist at present cannot be doubted. There can also be no disputing the fact that wrong conclusions drawn from a marshaling of facts and data may lead to untold damage. One of the charges that has frequently been leveled against educational research is that it is "half-baked," not *thoroughly* and *reliably* completed. It is the opinion of some that the most teachers can ever hope to do in research is to dabble in it and thus cast reflection upon the whole field. The writers of this text do not believe that this argument is very weighty. They are willing to admit that in the past the training of teachers has not been such as to develop research technique. They do believe, however, that it is a very easy matter in the training of teachers to develop in many of them the research attitude and to give them some of the controls in research techniques. It seems very probable also that the supposed damage done by a teacher who draws wrong conclusions from a research project can be greatly overestimated. In the first place any research findings by teachers in the classroom will be checked and rechecked by many other workers before the results are universally used. In the second place, most of the research work carried on by the teacher will doubtless be an attempt to recheck the conclusions drawn by others. In fact, it would seem that any damage done by teachers who carry on research will be lessened in proportion to the increasing number who undertake research; for the greater the number who participate, the greater the number of cross checkings that will probably occur.

A second argument advanced against teachers attempting to do research work is that they do not have time. The writers doubt if this argument should be credited with much weight, for the following reasons:

1. The teacher who develops the research attitude of mind will be able to perform her work more efficiently and will thereby save time. The pressure of work is sometimes the only thing that does save our time. Teachers who engage in research, as has been said, should learn to read more rapidly, to get the content of materials by skimming, and to learn where to find things efficiently and quickly. All this means that even if the teacher's load is not lightened, the by-products of research make it possible to save time for research.

2. Few teachers, if any, work up to their full capacity. Hours are wasted that might be spent profitably if a dominating purpose existed. Now, there is nothing more stimulating and nothing more conducive to hard work than research if one enjoys it. The thrill of finding things out for one's-self is such that all available time will be utilized until conclusions are reached. In short, the average teacher will be surprised at the number of "idle hours" that can be applied to educational research if she wishes to do it.

3. Teachers who are interested in research and who show a willingness to do it, might profitably be released from a part of their teaching load.

The findings of research, when properly verified, are so far-reaching that it would be a very simple matter for a teacher to develop some better method of teaching or learning whereby the school system in which she is engaged might be saved many times the amount the teacher is paid for doing research work. Moreover, the open-minded, progressive attitude developed by the teacher through research makes it possible for her to render full service in less time than one who lives in a rut, reads little, works half-heartedly, and has learned to "soldier."

The Value of Research. In a discussion of the value of research, it can be thought of as value to the individual who does

the research, or to the school system, or to the society that profits by the research. We have already discussed the value of research to the teacher who participates in it, but perhaps it will not be amiss to quote two research authorities who have summarized what they consider the value of educational research to the individual. Crawford ¹ suggests six ways in which he believes the research worker profits:

1. It is the only sure avenue to outstanding achievement as a scholar.
2. It is the only road to intellectual independence.
3. It enables one to understand and appreciate the research of others.
4. Ability in research enables one to qualify for responsible positions of leadership.
5. Results of research often yield attractive financial rewards.
6. It is an attractive and pleasant pursuit.

Turning to another authority, competent to speak in the field of research, one finds Woody ² suggesting seven benefits accruing to the educational worker who participates in a program of research:

1. It gives expert training in research.
2. It results in superior teaching.
3. It provides a great stimulus to professional growth.
4. It provides a mass of information with which to interpret current articles in educational periodicals.
5. It aids in establishing teaching as a profession.
6. It often involves directly or indirectly monetary rewards.
7. It results in certain spiritual satisfactions.

When one turns to the values which society or a particular school system receives from the results of research, he finds them exceedingly difficult to estimate. It is easy to see that the results accruing to society from Benjamin Franklin's playing with his key and kite have been far-reaching. The quick reports from Byrd on his trip to the Antarctic, and the generation of the power at Niagara Falls into electricity rest directly

¹ Crawford, Claude C., *Methods of Study*, published by the author, C. C. Crawford, University of Southern California, Los Angeles, 1926, page 156.

² Woody, Clifford, "The Values of Educational Research to the Classroom Teacher," *Journal of Educational Research*, October 1927, Volume 16, pages 172-178.

upon the findings of Benjamin Franklin. In fact, one could easily show that the results of research are the very cornerstones of society.

It is also easy to show that the values accruing from educational research not only have a monetary value but they also save the precious hours of child life. Research in supervision, for example, has shown that with supervision in a school system the teaching and learning can be so facilitated that the eight years ordinarily spent in the elementary school can easily be done in six years. This is a shortening in time of one-fourth, and since more than fifty per cent of the total budget is allotted to teachers' salaries, one can estimate that approximately one-eighth of the total school budget could be saved by means of supervision. The value of educational experimentation in terms of cash has been illustrated by McCall¹ as follows. "Three years ago an experiment was conducted in a school of five hundred pupils. The purpose of the experiment was to evaluate a group of teaching methods. A careful account was kept of the increased ability secured. Careful estimates were made of its financial value. A record was kept of expenditures. The value of the increased abilities secured was estimated to be worth \$10,000. This estimate was based upon the total cost in previous years of producing each unit of ability. The cost of test material used and of the special supervision required amounted to \$540. The net annual saving, not counting future compounding of the abilities, was \$9,460."

Many other educational research investigations and experimentations could be cited to show that the cash returns on educational research are by no means a negligible factor. The largest returns, however, are not in cash. They are the returns made through a saving of the crushed hopes and blasted ambitions of our boys and girls. It is they who receive the real values derived from educational research. It is they who save the time that is too valuable to be estimated in dollars.

¹ McCall, William A., *How to Experiment in Education*, The Macmillan Company, 1923, page 3.

Methods Used in a Scientific Study of Education. It is quite generally agreed among research students of education that there are at least five more or less clear-cut steps in any research investigation:

1. *Formulating and defining the problem.* In this step it is essential that the problem be relatively narrow so that it is possible to conceive of it in its totality. The ability to see difficulties that need solution is by no means the least important trait of a research student in education.

2. *Collecting and assembling the necessary information and data for the solution of the problem.* To get the necessary data it is essential that one be able to observe, experiment, test, and measure.

3. *Classifying and analyzing the data.* Data and information are of but little help in the solution of a problem unless they are properly arranged and classified. Indeed, the essential difference between common sense knowledge and scientific knowledge is that the latter is more highly classified. In order to classify data intelligently in educational research, one is usually expected to have an acquaintance with statistical devices such as frequency tables, curves, and graphs.

4. *Developing the hypotheses.* An hypothesis is an assumption made on the basis of the data available. One great trouble with some students in education is that they sometimes jump at conclusions or hypotheses before they have studied the facts carefully enough. Indeed, conclusions are often drawn even before a sufficient number of facts are collected. The beginning student in research would do well to bear in mind that suspended judgment usually pays big dividends. A hurried conclusion, when wrong, does not save time. On the other hand, it is not only time-consuming but deadening to the inner urges of the one who engages in it.

5. *Testing the validity of the assumptions made.* It is not always an easy matter to test the conclusions one has drawn. Sometimes the test involves a repetition of the experiment and at other times it will involve its application under quite different

existing conditions. At any rate, assumptions must be made and tested until a correct conclusion has been found.

While seldom stated as a sixth step in research, it should be pointed out to the beginner in research that there is no more essential item in an investigation than the inner urge of the investigator. When a problem in educational research is undertaken it ought not to be merely a problem to be solved; it must be the student's problem. He should feel keenly the desire to do something about it.

The methods used in scientific research have been classified in various ways. Almost all types of research will come under one of the five headings mentioned below:

The historical method. The historical method needs no discussion. It is for the most part based on indirect knowledge derived from a study of the past. The research worker who uses this method is usually satisfied with pointing out trends.

The statistical method. This method is very widely used in education and is often involved in each of the other methods. It is never looked upon as an end in itself but as a means to an end. In the statistical method facts are collected and marshaled into frequency tables, graphs, and curves, so that they can be studied better. In this method the number and kind of cases studied is quite important. Usually the larger the number of cases involved, the greater will be the reliability of the conclusions. It is important also that one know the kind of cases used. Conclusions based on findings from a selected group of pupils may not hold at all when applied to an unselected group. Examples of educational research where the statistical method has been used are legion. One illustration will suffice. Not long ago a graduate student at the University of Kentucky wanted to know whether high school pupils who graduate from the B Class high schools do as good work in the university as those who graduate from the A Class high schools. To do this he looked up the grades of a great many high school pupils of comparable intelligence in both the B and the A Class schools. He then checked the grades made by each group after entering

the university. This involved a presentation of data in tables, curves, graphs, and the like, and required the use of such terms as medians, modes, and correlation, all of which are statistical terms.

The group experimental method. In the group experimental method where either one or more groups of subjects may be utilized there is usually an attempt to measure the amount of change brought about by some one variable. For example, if one wishes to know what effect scolding has upon the achievement of a class, he could take two classes that are equivalent in every respect, and then scold one but not the other. Then, after teaching for a time, he should retest both groups. The difference in achievement, if all other factors were equated and kept constant will be due to the scolding.

McCall¹ mentions three types of experimental methods:

1. The one-group method. McCall claims this is the most frequently used of all types of investigations. When a group of pupils is tested, then taught in a particular way, then tested again, and then taught, if we find each time the amount of change produced between each two testings, we have an illustration of the one-group method, provided all factors save the one tested are kept the same.

2. The equivalent-groups method. In this method there is more than one group and the groups are kept equivalent. The groups are tested before starting the experiment, then one group (the experimental group) receives the training while the other group (the control group) does not. After a time both groups are tested again. The differences in change produced in the two groups between testings are supposedly a measure of the effects of the training.

3. The rotation method. Commenting on the rotation method, McCall² says, "If a teacher wishes to study, by means of the rotation method, the effect of praising *vs.* scolding,

¹ McCall, William A., *How to Experiment in Education*, The Macmillan Company, 1923, pages 14-19.

² *Ibid.*, page 19.

she first praises S_1 , and measures the result, and then scolds the same S_1 , and measures the result. This is the one-group method thus far. She first scolds S_2 , and measures the result, and then praises S_2 , and measures the result. In other words she rotates the order of the EF's. She combines the results from praising both groups, and compares the sum so found with the sum of the results from scolding both groups. This comparison shows whether praising has been more or less effective than scolding, how much, and in what direction." This method has been used in attempting to find out whether one can teach better with twenty-five or thirty pupils in a class than with forty-five or fifty.

The case-study method. In this method certain cases—they may be subnormal pupils, inattentive pupils, exceptional teacher, or what not—are selected for intensive study. In the case-study method the student is confronted with actual cases, just as in the study of law or in the study of medicine. This method is being most widely used in education today. One of the best publications available for showing the use of the case method in education is one by Dr. Reavis,¹ of the University of Chicago.

The questionnaire method. One of the widely used methods in research is that of the questionnaire type. It is so easy to attempt to get what one wants by means of a questionnaire sent to people who are supposed to be in possession of the data, or at least to people to whom the data are available. This method has been greatly overdone in the past.

Often the one to whom the questionnaire is addressed fails to reply and if he does reply the answers are given in such a hurried manner as to make the conclusions drawn from them very unreliable. Often the questions are so stated that no one can tell what is wanted. Articles have been written setting forth the essentials of a good questionnaire, giving the conditions under which the questionnaire method might be successfully used, and showing how a questionnaire once sent should be

¹ Reavis, Wm. Claude, *Pupil Adjustment in Junior and Senior High Schools*, D. C. Heath and Company, 1926.

followed up. Any student contemplating the use of the questionnaire method in research should first acquaint himself with some of these articles.

As has already been stated, methods of research other than the five listed here are sometimes used, but the five methods mentioned are the ones most widely used.

Some Problems in Education Needing Research. There is no limit to the number of problems in education that can and should be solved by means of educational research. A mere cataloging of such problems would involve a whole volume in itself. Just a few directly concerned with teaching will be mentioned here as illustrations:

1. What is the greatest and what is the least number of pupils a teacher should have in her class to do her most effective work?

2. How valuable is supervision as a means of improving teaching?

3. What is the best type of lesson plan for the teacher?

4. How important is the socialized recitation? When and how should it be used?

5. To what extent should teachers take a specialized type of training?

6. What should be the minimum requirements for teaching in the elementary schools? The high schools? The university?

7. In a recitation how much time should be given to the assignment? To the review?

8. What factors should enter into a good salary schedule?

9. To what extent should teachers help make the curriculum?

10. How difficult is it to correct wrong responses when once made by the pupil?

11. What are the principles that should govern a good drill lesson?

12. What courses in education are most helpful to a beginning teacher?

13. What techniques are most valuable for improving reading rates? Reading comprehension?

14. When should pupils skip a grade? What grades can be skipped most easily?

15. How can one diagnose difficulties of pupils in reading? What remedial measures should be applied after the diagnosis is made?

16. How may motivation be secured in teaching?

17. What devices are most effective for learning?

18. How can children be taught to observe?

19. How often should different types of materials in the curriculum be reviewed?

20. What are the effects of learning curves as an incentive?

21. What are the advantages of homogeneous grouping?

22. What combinations in arithmetic give the most trouble?

Hundreds of other problems could be listed. Those listed here are directly related to the work of the teacher, and teachers interested in research can render a great service in helping to solve them.

Reporting the Findings in Educational Research. Teachers who engage in research should be urged to write up and report their findings. In writing up the report the conditions under which the experiment or investigation was done should be stated as well as the conclusions reached. It is not an exaggeration to say that often the effectiveness with which the report is made is as important as the conclusions. Manifestly, if the report is so vaguely presented that there is doubt in the mind of the reader as to what is meant, the wrong interpretation of the findings will probably result. Effective writing of reports on research comes about largely through practice. No formula will guarantee effective reporting. The following ten points, however, are usually considered essential in any report on research work:

1. The problem on which one is reporting should be defined and set forth clearly.

2. The data should be so introduced that the reader will understand them and be aware of their limitations.

3. Develop the important ideas. Do not expect the reader to read between the lines.

4. Avoid the overworking of certain words or phrases.
5. See that tables and other presentations are self-explanatory. Table numbers and headings must agree with the body of the report.
6. Enter bibliographies alphabetically.
7. Always cite footnote reference for any authority quoted. In this connection the name of the author, the name of the book or article, the volume, the page, the publisher, and the date should be given. Consistency is essential here.
8. Conform to the usage of good English. Split infinitives and the use of the first person are usually frowned upon.
9. Show by your footnote citations that you are acquainted with the literature in the field.
10. Practice intellectual honesty.

Quoting the works of others without giving due credit is known as plagiarism. The illustration given below is quoted from Good ¹ and well illustrates the importance of intellectual honesty.

Quite recently at a large graduate school of education a Doctor's thesis was accepted and published as a number of a well known monograph series. The monograph was distributed to professional journals for review, advertised, and sold for a short time. Two or three experts in the field treated recognized fairly large portions of the thesis as ill-disguised paraphrasings of a previously published book on the same subject. When these facts were called to the attention of the graduate school in question appropriate regret was expressed and a request went out that all copies of the thesis be returned and that no reviews be published. Its number was struck from the list of the monograph series in question. It is said that the entire edition of the publication was burned, and the illegitimate Ph.D. was called back to his graduate school for severe criticism. The consequences of such intellectual dishonesty were far reaching in that discredit was reflected upon the graduate student involved, the faculty committee which accepted the thesis, the graduate school itself, and the cause of education.

It often happens that one may unknowingly express as his own an idea which he has received from other writers. However,

¹ Good, Carter V., *How to Do Research in Education*, Warwick and York, Baltimore, 1928, page 213.

in all instances, his attitude should be one of intellectual honesty, and his motives above reproach.

QUESTIONS AND EXERCISES

1. By what criteria might we answer the question, "Is education a science?"
2. Does the actual carrying on of research projects really make a teacher a better teacher, or would it be better for teachers to do nothing but teach? Justify your answer.
3. Make a list of problems in education whose answer depends upon research yet to be undertaken?
4. What is meant by the phrase, "actual schoolroom conditions"?
5. Explain in detail how you would set up an experiment to determine which of two methods—for example the lecture system and the quiz and answer method—was the best in teaching a fifth grade geography class.
6. Do you know of any cases where it appeared to you that intellectual honesty in writing or reporting on research was not practiced? How probable is it that one writer may express the same idea in almost the same language as another and yet be entirely honest in it?
7. What types of research in education are directly dependent upon educational measurements? Are there any types of educational research that do not in some way depend upon measurements? Explain.
8. Give illustrations of the case-study method of research in education.
9. Interview a number of graduate students who have written a thesis as a part of the requirements for an advanced degree. Ask them what they consider to be the real values gained from writing a thesis. Ask each student just what contribution he thinks his thesis made to our already existing knowledge.

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

PART V
PHILOSOPHY OF EDUCATION

CHAPTER XXII

EDUCATIONAL ORGANIZATIONS

Every student in education should know something about the educational organizations that exist in the United States. It is impossible to discuss in this chapter all of the educational organizations existent in this country. A list of these alone would make up a large number of pages. There are some, however, that are so outstanding that it seems desirable to incorporate a brief discussion of them for beginning students in education. They will be discussed under the following heads: honor societies, general; honor societies in special fields; professional fraternities; national and sectional education associations; educational boards and foundations.

Honor Societies, General. The 1930 edition of Baird's *Manual of American College Fraternities* lists eight honor societies of a general nature. These are the Blue Key, Mortar Board, Omicron Delta Kappa, Phi Beta Kappa, Phi Eta Sigma, Phi Kappa Phi, Sigma Xi, and Sigma Zeta.

The Blue Key. Blue Key, national honor fraternity, founded at the University of Florida in 1924 by Major B. C. Riley, is a new departure in the field of the honor society. In 1931, about six years after the founding of Blue Key, there was a total chapter roll of fifty-three, upon which appear the names of state colleges and universities, as well as private and endowed schools. The organization follows a policy of a balanced chapter roll in this respect, holding that a predominance of either the state or privately endowed school would decrease the value of the organization to institutions as a whole. The fraternity co-operates with the faculty in the handling of student problems, either initiating the movements which are executed, or follow-

ing the suggestions of needed reforms on the campus. Meetings are held twice each month, after the manner of service clubs which have become so popular in civic life, with luncheon or dinner, and inspirational and service talks during and after the meal. Eligibility for membership is based on leadership, which is understood to include scholarship, student activities, character, and service.

Mortar Board. Mortar Board, a national senior honorary society for women, was founded February 16, 1918, at Syracuse, New York, by representatives from local honorary groups at Swarthmore College, Ohio State University, Cornell University, and the University of Michigan.

In the preamble of the constitution the purpose of Mortar Board is stated thus: "To provide for the coöperation between these societies, to promote college loyalty, to advance the spirit of service and fellowship among university women, to maintain a high standard of scholarship and to recognize and encourage leadership, and to stimulate and develop a finer type of college woman." Qualifications for active membership are service, scholarship, and leadership. Those persons are eligible, in the spring of each year, who will have completed their junior year at the opening of the fall term. Under the constitution no chapter is permitted fewer than five nor more than twenty members.

There are at the present time forty-eight active chapters and ten alumnae organizations of Mortar Board in the United States. The total membership is 5,700. The official publication is the *Quarterly*.

National Convention, held biennially, is the governing body of the organization. Under the supervision of the Chairman of Personnel, the active chapters carry on some phase of personnel work among undergraduates, while the National Committee offers assistance to graduating seniors.

Omicron Delta Kappa. Omicron Delta Kappa was founded at Washington and Lee University, December 3, 1914. Omicron Delta Kappa's membership is restricted to men. Its members

are chosen from juniors and seniors on the campus who have attained eminence in scholarship, athletics, campus life, college publications, and other recognized fields. It is committed to coöperation with the administrative organization of the institution in building finer ideals, higher standards, and a more wholesome community life for the institution it serves. Its ideals are recognition, inspiration, opportunity, character. There are in the United States at the present time thirty-three active circles, with a total membership of 3,500.

Phi Beta Kappa. Phi Beta Kappa, the oldest and most noted of college honor societies, was founded at the College of William and Mary on December 5, 1776. Its motto is, "Love of learning is the helmsman of life." The three stars on the gold key, the most coveted award in American college life, signify Friendship, Morality, and Literature.

In the beginning, Phi Beta Kappa was devoted chiefly to the discussion of political, philosophical, and general subjects and to the development of close bonds of friendship, but by the end of the first half century it had become purely an honor society. As such it remains today, the champion in our democratic system of education of those students who manifest in liberal studies a true scholarly ability combined with good character and breadth of cultural interest—not the student who "works for" membership or is simply a "grade getter." Phi Beta Kappa grants chapters only to those colleges qualified to serve adequately that type of student.

The growth of Phi Beta Kappa began in 1779 when charters were granted to Harvard and Yale. There are now 114 chapters. The University of Kentucky received the one-hundredth charter which was granted in 1926. Other interesting dates are 1831, when the Harvard Chapter took the lead in abolishing secrecy; 1875, when the Vermont Chapter elected the first women members, thus fully establishing the policy of electing students without regard to race, color, creed, or sex; and 1881, when the Harvard Chapter invited to its centennial celebration delegates from all other chapters with a view to greater unity

and effectiveness. This resulted in the United Chapters with Charles W. Eliot as the first president and with governing bodies in a National Council and a Senate.

In the list of the 82,000 members of Phi Beta Kappa, over 60,000 of whom are now living, appear the names of many presidents, chief justices, authors, educators, and other persons noted in the annals of America. This fact testifies to the possibility of detecting in student days with fair accuracy those persons who later will become noted. Phi Beta Kappa is at present engaged upon a careful study of the qualifications for membership, with a view not only to adjusting itself to changed educational conditions but also to exercising leadership in this realm.

Phi Eta Sigma. Phi Eta Sigma is a freshman honorary society. It was established at the University of Illinois, March 22, 1923. Its purpose is to encourage and award high scholastic attainment among young men who are members of the freshman class. It was hoped by its founders that recognition of ability and hard work given during the freshman year would be a stimulus to greater endeavor throughout the following years of the student's career. Election is automatic to all men freshman students who make a designated scholastic average. It will be seen, therefore, that scholastic attainment is the only basis for selection. In this respect it is unlike many other honor societies. There are only eleven active chapters in the United States at the present time.

Phi Kappa Phi. Phi Kappa Phi was founded at the University of Maine in 1898. It is an honor society composed of undergraduate students, graduate students, and college teachers, elected from all departments and all colleges of the institution. Its primary object is to emphasize scholarship and to stimulate greater mental endeavor. It seeks to foster learning in competition with the numerous attractive and conflicting interests affecting the modern every-day life of the undergraduate by the prize of membership, and by awards for superior achievement. Membership may not be

granted to more than one-fifth of the entire graduating class of any college, school, or department of the institution. Undergraduate members are chosen during the year preceding their graduation, and to be eligible for election the student must rank in the upper fifth of his class. This society stands for the unity and democracy of learning, and membership in it is open to members of other honor societies and fraternities, and to both men and women. There are at the present time forty-five active institutional chapters and one alumni chapter, with a total membership of more than 20,000.

Sigma Xi. The Society of the Sigma Xi was founded at Cornell University in 1886. The object of the society has always been the promotion of scientific research. In its early years the activities of the society were limited to the selection of young men and women in the scientific and technical courses of various institutions who had shown marked excellence in the study of science. In the institutions in which chapters were established the society was the nucleus of much of the science interest of the colleges and universities. Scientific meetings were held which were addressed by men and women who were prominent among investigators, and by engineers who had accomplished notable pieces of construction work throughout the country. The society thus from its inception became a company of individuals imbued with a research spirit. As science has progressed the society of the Sigma Xi has added to its original activities many others, but all of them have the same object in view, namely the promotion of research. Various chapters have established research prizes, some of them taking the form of awards upon the completion of a particular piece of research work, and others taking the form of fellowships to be used by the holders in further pursuit of investigations either in this country or abroad. Chapters have also published series of lectures on particular topics, such as "The Evolution of Matter," "The Evolution of Man," and "Growth." In more recent years the national organization, by means of contribu-

tions from a large body of its members who are not connected with educational or research institutions, has established research funds which are distributed annually as "grants in aid" for research work.

The motto of the society consists of the Greek words "Spoudon Xunones," which is liberally translated "Companions in Zealous Research." There are now fifty-eight chapters in institutions of this country and in Canada, and twenty-eight Sigma Xi clubs. There are two classes of constituents, namely associates, young men and young women who have given promise of scientific ability but who have not had opportunity to engage in research; and members, who have more experience in science and who have actually performed a piece of research work. The total enrollment of members and associates is now approximately 25,000, 10,000 of them being connected with the institutional chapters, and the remainder being scattered all over the world. There are Sigma Xi members or associates in fifty-five different countries of the world.

Sigma Zeta. Sigma Zeta Science Society is an undergraduate honor science society, founded at Shurtleff College in the fall of 1925. There were thirteen charter members, ten of whom were junior and senior students who were majors in either science or mathematics, and the three faculty members in those departments. It was originally planned as a purely local organization, but it seemed to fill a need that no similar group was able to fill and within the following year a second chapter was established at McKendree College, Lebanon, Illinois. In that same year Sigma Zeta was incorporated as a national organization under the laws of the state of Illinois. Since that time the number of chapters has increased to seven which are distributed among schools in Missouri, Virginia, and Wisconsin in addition to those in Illinois.

The society as now organized elects each year at the annual meeting its national officers who serve for the ensuing year. These officers constitute the Grand Council and care for the business of the organization as a whole. Each chapter,

however, has its own officers who attend to the affairs of the chapter.

The society has a twofold purpose: first, to give recognition for high scholarship in science to students during their undergraduate training; and second, to encourage among students of the junior and senior years in college a desire to carry on some semi-original research and provide for them an opportunity to do some original thinking. The organization of the society is much like that of Sigma Xi. The latter has come to be very largely a graduate fraternity and Sigma Zeta attempts to do for the undergraduate what Sigma Xi does for the graduate student. Like Sigma Xi, Sigma Zeta has two types of members—active and associate. There are now seven chapters with a membership of 400.

Honor Societies in Special Fields. There were in 1930 thirty-three honor societies in special fields in institutions of higher learning in the United States. Chemistry has a larger number of honor organizations than any other special field, being credited with four. A list of these societies, as given in Baird's *Manual of American College Fraternities* for 1930, follows:

Agriculture

Alpha Zeta
Gamma Sigma Delta

Art

Kappa Pi

Biology

Beta Beta Beta
Phi Sigma

Chemistry

Gamma Sigma Epsilon
Iota Sigma Pi
Phi Lambda Upsilon
Theta Chi Delta

Civil Engineering

Chi Epsilon

College Bands

Kappa Kappa Psi

Commerce

Beta Gamma Sigma
Delta Mu Delta
Gamma Epsilon Pi

Dentistry

Omicron Kappa Upsilon

Dramatics

Alpha Psi Omega
National Collegiate Players

Electrical Engineering

Eta Kappa Nu

Engineering

Sigma Tau
Tau Beta Pi

Forensics

Alpha Phi Epsilon
Delta Sigma Rho
Pi Kappa Delta

French

Beta Pi Theta

Home Economics

Omicron Nu

Journalism

Theta Sigma Phi

Law

Order of the Coif

Medicine

Alpha Omega Alpha

Music

Pi Kappa Lambda

Oratory and Debating

Tau Kappa Alpha

Osteopathy

Sigma Sigma Phi

Physics

Sigma Pi Sigma

Romance Languages

Phi Sigma Iota

All of these honor societies are accomplishing splendid things in their respective fields. It will not be possible to discuss more than six of them in this chapter. These six are not chosen because they are more outstanding than any others in the group, but because they are among the leading honor societies in six different fields of work in institutions of higher learning. Information concerning any others in this list may be obtained by consulting Baird's *Manual of American College Fraternities*.

Alpha Zeta. Alpha Zeta was founded at Ohio State University, November 4, 1897. It is an honorary agricultural fraternity open to membership to students in standard four-year agricultural college courses. Each chapter has some form of social activity, but only four chapters operate houses. These are at Ohio, Cornell, Pennsylvania State, and Minnesota. There are four grades of membership—student, alumni, associate, and honorary. Unlike some of the other honor organizations Alpha Zeta is open to white male students only. A student is eligible to membership at the completion of one and one-half academic years of his four-year curriculum, provided his grades place him in the upper two-fifths of his class and that he possesses good character and qualities of leadership. There are thirty-nine chapters of Alpha Zeta in the United States now, with a total membership of 10,112.

Alpha Omega Alpha. Alpha Omega Alpha is an honor society

in medicine. It was organized in 1902 and is open to both men and women. It has been patterned after Phi Beta Kappa and is not social in its nature. It is primarily intended to elevate the standard in the medical profession. It has thirty-seven active chapters at the present time.

Beta Gamma Sigma. An honor society in commerce was organized at the University of Wisconsin in the spring of 1907 with the name Beta Gamma Sigma. It became a national organization in 1913 when similar societies at the University of Illinois and the University of California merged with it and accepted the name Beta Gamma Sigma. In 1918 Beta Gamma Sigma entered an agreement with the American Association of Collegiate Schools of Business to the effect that the Association would recognize no other honor society in collegiate schools of business if Beta Gamma Sigma would establish chapters only in institutions meeting the qualifications for membership in the American Association of Collegiate Schools of Business. The Association is still recognized as the authoritative organization for standards in its field, and its membership includes all the institutions having chapters of Beta Gamma Sigma. There are now thirty-two active chapters in the United States, with a total membership of approximately 5,000.

Omicron Nu. During 1911 and 1912 Miss Maude Gilchrist, Dean of Home Economics, and Miss Agnes Hunt, professor of Domestic Science, together with the other members of the faculty of Michigan Agricultural College, decided that an honor society in home economics would be of great advantage in stimulating scholarship and in creating greater interest in home economics and related subjects. A committee was appointed to draft a constitution looking toward the inclusion of colleges and universities which offer a four-year curriculum in home economics and grant a Bachelor of Science or Bachelor of Arts degree.

This constitution was accepted and the first business meeting convened April 25, 1912. At this meeting the Alpha Chapter of Omicron Nu was organized. Beta Chapter at New York State College for Teachers was organized in the spring of 1913, and

other chapters soon followed. On April 11, 1931, the twenty-sixth chapter was installed. There are four alumni chapters.

The aim of Omicron Nu is to recognize and promote scholarship, leadership, and research in the field of home economics. The total membership of the organization is 3,759.

Order of the Coif. The Order of the Coif is an honorary legal fraternity which grew out of an earlier society known as Theta Kappa Nu. This society was founded at the University of Illinois in 1902 for the purpose of promoting scholarship among law students. It had a slow growth and in 1910 had six chapters. In the meantime, there had been organized at the Law School of Northwestern University in 1907 a local society with the same object as Theta Kappa Nu, but which had adopted the name, "Order of the Coif." The desirability of affiliating with a national organization led the undergraduate members of the Order of the Coif to accept a charter from Theta Kappa Nu. The constitution of Theta Kappa Nu was revised in 1912, and the name was changed to "Order of the Coif." Election to this fraternity is restricted by the national constitution to the ten per cent of the senior class who have attained the highest rank in their law-school work, with the exception that each chapter may annually elect to honorary membership not more than one person who has attained distinction as a member of the legal profession. There were in 1931 twenty-nine chapters with a total enrollment of 2,200.

Tau Beta Pi. Tau Beta Pi is an honorary society in engineering founded at Lehigh University in June 1885. Its purpose is to recognize those students who have maintained a high grade of scholarship, with exemplary character, and to foster a "spirit of liberal culture in the engineering schools of America." It has one clause rarely found in honor organizations of that kind, to the effect that membership may be offered to graduates of engineering colleges where there is no chapter, provided the candidate has fulfilled the regular eligibility requirements as a student. There are fifty-nine active chapters in the United States, with a membership of almost 20,000.

Departmental and Professional Fraternities. The 1930 edition of Baird's *Manual of American College Fraternities* lists ninety-six departmental and professional fraternities in the United States of America. Students in education will be interested in a list of these fraternities. Medicine, with twenty-four, leads in the number of such organizations. Education has eleven professional fraternities.

Accounting

Beta Alpha Psi

Advertising

Alpha Delta Sigma

Gamma Alpha Chi

Architecture

Alpha Rho Chi

Scarab

Art

Delta Phi Delta

Arts and Sciences

Upsilon Delta Sigma

Business Women

Phi Chi Theta

Chemistry

Alpha Chi Sigma

Commerce

Alpha Kappa Psi

Delta Sigma Pi

Phi Gamma Nu

Tau Delta Kappa

Dentistry

Alpha Omega

Delta Sigma Delta

Psi Omega

Upsilon Alpha

Xi Psi Phi

Dramatics

Theta Alpha Phi

Editing

Hammer and Coffin

Education

Alpha Sigma Alpha

Alpha Sigma Tau

Delta Sigma Epsilon

Kappa Delta Pi

Kappa Phi Kappa

Phi Delta Kappa

Pi Kappa Sigma

Pi Lambda Theta

Sigma Sigma Sigma

Sigma Tau Gamma

Theta Sigma Upsilon

Education and Social Service

Alpha Phi Omega

Engineering

Theta Tau

English

Sigma Tau Delta

Fine Arts

Lambda Phi Delta

Fire Insurance

Alpha Chi Epsilon

Forensics

Phi Delta Gamma

Sigma Delta Phi

Zeta Kappa Psi

Forestry

Xi Sigma Pi

Geology—Mining—Metallurgy

Sigma Gamma Epsilon

Home Economics

Phi Upsilon Omicron

Journalism

Alpha Chi Alpha

Pi Delta Epsilon

Sigma Delta Chi

Kindergarten—primary

Delta Phi Upsilon

Law

Delta Theta Phi

Gamma Eta Gamma

Kappa Beta Pi

Phi Alpha Delta

Phi Beta Gamma

Phi Delta Delta

Phi Delta Phi

Sigma Delta Kappa

Sigma Nu Phi

Tau Epsilon Rho

Literature

Chi Delta Phi

Sigma Upsilon

Medicine

Alpha Epsilon Iota

Alpha Kappa Kappa

Alpha Mu Pi Omega

Alpha Psi

Alpha Sigma

Delta Omega

Lambda Phi Mu

Nu Sigma Nu

Nu Sigma Phi

Omega Epsilon Phi

Omega Upsilon Phi

Phi Alpha Gamma

Medicine—Continued

Phi Alpha Sigma

Phi Beta Pi

Phi Chi

Phi Delta Epsilon

Phi Rho Sigma

Phi Sigma Gamma

Pi Upsilon Rho

Theta Kappa Psi

Military

Scabbard and Blade

Music

Delta Omicron

Kappa Gamma Psi

Mu Phi Epsilon

Phi Mu Alpha—Sinfonia

Phi Sigma Mu

Sigma Alpha Iota

Music and Drama

Phi Beta

Pharmaceutics

Kappa Psi

Lambda Kappa Sigma

Pharmaceutics—Chemistry

Phi Delta Chi

Physical Education

Delta Psi Kappa

Phi Epsilon Kappa

Sigma Delta Psi

Pre-medical

Omega Beta Pi

Science

Chi Beta Phi

Gamma Alpha

Social Science

Pi Gamma Mu

College students who are preparing for the profession of teaching will be more interested in the departmental and professional fraternities in education than in any of the other fraternities in this group. Space will not permit discussion of all the eleven fraternities listed under education. A brief discussion of Phi Delta Kappa, Kappa Delta Pi, Delta Phi Upsilon, and Pi Lambda Theta will give the reader an idea of the types of organizations in this field.

Phi Delta Kappa. Phi Delta Kappa is a professional fraternity in the field of education. It was organized as a national fraternity March 1, 1910, by the amalgamation of three fraternities, each of which had been in existence for several years, having similar aims and purposes, and each characterized as professional in nature. Pi Kappa Mu was organized at Indiana University on January 24, 1906. It had established chapters in Indiana University, Stanford University, and the University of Iowa. Phi Delta Kappa was organized at Columbia University on May 13, 1908. Additional chapters were established at the University of Chicago and University of Minnesota. Nu Rho Beta was organized at the University of Missouri on February 23, 1909. It made no attempt to expand to other institutions but it used its influence to promote the amalgamation of the three existing fraternities into one national fraternity. Consequently, the three fraternities, Pi Kappa Mu, Nu Rho Beta, and Phi Delta Kappa amalgamated and became known as Phi Delta Kappa.

Phi Delta Kappa has sometimes been called an honorary fraternity. This impression is not correct, however. Phi Delta Kappa is not and never has been an honorary fraternity. The constitutional statement relative to the nature of Phi Delta Kappa is an accurate statement and true to the ideals of Phi Delta Kappa since the very beginning of the organization. It reads, "Phi Delta Kappa shall be a professional education fraternity. In its nature it shall present three aspects: namely, the professional, the fraternal, and the honorary."

Phi Delta Kappa exists for the mutual help of men of sound

moral character and of recognized professional training and ability who are engaged in the scientific study of education. Phi Delta Kappa endeavors to make three ideals dynamic in itself as an organization and in the professional lives of its members: research, both in and out of the universities so that problems may be understood and difficulties scientifically solved; service, as an expression of the unselfish desire to render the results of training of real benefit to humanity; and leadership as an encouragement of constant professional growth so that individual fitness for larger service may result.

Phi Delta Kappa is open to juniors, seniors, and graduate students, although its elections to membership are almost entirely from the graduate field. Membership is limited to men of the white race. A national directory which is just off the press lists a total membership of 12,636. There are thirty-eight chapters located in institutions which support strong schools of education and eighteen alumni chapters located in various population centers of the country. Phi Delta Kappa maintains a national office, publishes a national magazine, provided a \$2,500 fellowship in education in 1930-31, and is devoted to the advancement of the cause of education and the profession of teaching.

Kappa Delta Pi. Kappa Delta Pi is an honor society in education, for both men and women. There were seventy-four chapters in the United States, April 1, 1931, with a total membership of more than 15,000. To be admitted to membership in Kappa Delta Pi students must be at least juniors in the institution, must be in the upper quartile in scholarship, and must have demonstrated leadership ability.

Kappa Delta Pi initiated a new idea in fraternity life when it established a Laureate Chapter. There were on April 1, 1931, twenty-two members of the Laureate Chapter. Kappa Delta Pi issues a magazine—the *Kadelpian Review*—which is one of the most pretentious of all the magazines issued by honor societies. This society established a lectureship series, to be given at the annual banquet in connection with the Department of Super-

intendence of the National Education Association. Dr. John Dewey gave the first lecture at Cleveland in 1929; Dorothy Canfield Fisher gave the second lecture at Atlantic City in 1930; and Dr. William Lyon Phelps gave the third lecture at Detroit in 1931. These lectures are published and are available at a nominal price to members of the fraternity and to persons interested in them.

Delta Phi Upsilon. Delta Phi Upsilon is a national kindergarten-primary fraternity, both professional and honorary in character. It was founded at Broadoaks Training School, Pasadena, California, in 1923. Its aim, quoting from the constitution, is "to promote professional attainments and to set a high goal of achievement before the undergraduate students." To be eligible to membership the student must have attained a scholastic average of B. Membership is not based on scholarship alone, but such points as qualities of leadership, campus activities, professional attitude, are considered. The fraternity has a large scholarship fund which is loaned to its members. It also has a lectureship board which sponsors speakers at various chapters and professional functions. There were only six active chapters in the United States in 1930, with a membership of more than 625.

Pi Lambda Theta. Pi Lambda Theta was organized in July 1917. It was formed by the union of seven chapters, each of which had been organized as a local organization having similar ideals and motives, except that the chapter at Washington had been organized by the chapter at Missouri and was identical in purposes with the Missouri Chapter. Pi Lambda Theta is an organization whose membership is open only to women in the field of education and whose purpose is the development of high professional ideals and standards, and the encouragement of advanced study in education among women.

National, International, and Sectional Educational Organizations. Every state in the Union has some type of educational organization for the promotion of public school education within the state. In most instances the name of the organization bears

the name of the state. In Pennsylvania the state organization is called the Pennsylvania State Education Association. In Washington it is called the Washington Education Association.

In addition to the state organizations, many states have sectional educational organizations, and in most large cities the teaching personnel of the city is organized into an educational association for the purpose of building professional spirit, stimulating professional growth, and making provision for larger service to the children in the community. Almost every school unit in the United States of America has its local association that deals with local educational problems. There is an earnestness of purpose in the teachers of America, and a desire for growth on the part of the members of the profession that causes them to bind themselves together for the professional good of the community served.

In addition to the local, sectional, and state organizations, there are national organizations in this country that deal altogether with educational problems. The largest of these is the National Education Association, which is briefly discussed in this chapter. The American Vocational Association, the American Association for the Advancement of Science, the American Association of University Women, and many other similar organizations are rendering conspicuous service to the field of public education. There is one organization that is wholly unlike and much larger than all the others, that is definitely an educational organization, that might very well be included with this group, namely the National Congress of Parents and Teachers. A brief discussion of this organization will be found at the end of this section.

Students of education who desire to ascertain with any degree of accuracy the effect of educational organizations upon worthy educational legislation in America need only to go back into the history of these associations and study their recommendations to the legislative bodies in the states and the nation. They have originated much of the constructive legislation in the statutes of the United States today.

National Education Association. The National Education Association was organized at Philadelphia in 1857. It was known as the National Teachers Association from the time of its organization until 1870, when the name was changed to the National Education Association. It was incorporated by act of Congress in 1907, and the new charter designated its name as the National Education Association of the United States.

"The purpose and object of the National Education Association," under the terms of its incorporation, "shall be to elevate the character, to advance the interests of the profession of teaching, and to promote the cause of education in the United States."

The National Education Association includes the following departments:

- Department of Adult Education.
- Department of Business Education.
- Department of Classroom Teachers.
- Department of Deans of Women.
- Department of Educational Research.
- Department of Elementary School Principals.
- Department of Kindergarten-Primary Education.
- Department of Lip Reading.
- Department of Rural Education.
- Department of School Health and Physical Education.
- Department of Science Instruction.
- Department of Secondary School Principals.
- Department of Social Studies.
- Department of Special Education.
- Department of Superintendence.
- Department of Supervisors and Directors of Instruction.
- Department of Teachers of Home Economics.
- Department of Visual Instruction.
- Department of Vocational Education.
- American Association of Teachers Colleges.
- National Council of Education.

It would be difficult to estimate the value of this organization to public education in the United States of America. It has stimulated better teaching, educational enlightenment, im-

provement in supervision and administration, and educational research in this country to a marked degree. Many of the departments of the National Education Association issue year-books that are treasured by the members of these departments and that have a wide circulation among individuals who are not members. It would be well if every teacher in America would become a member of this organization. The annual dues for membership are two dollars, which entitle one to receive the *Journal of the National Education Association*. This is the official publication of the organization and is published every month in the year except July, August, and September. The National Education Association of the United States is the largest educational organization in the world. Its total membership in 1931 numbered more than 220,000.

Department of Superintendence. The largest single division of the National Education Association is the Department of Superintendence. The National Education Association holds its meeting in the summer, while the Department of Superintendence holds its meeting near the end of February. Fourteen departments and organizations join with the Department of Superintendence in the winter meeting. The membership of the Department of Superintendence in 1931 reached a total of 4,013.

American Vocational Association. The American Vocational Association was formed in Cleveland in 1925. It was an outgrowth of the National Society for Vocational Education. Its purpose is to promote vocational education to the end that all workers in this field shall have adequate training and shall be competent in their vocations. It has grown from a membership of 2,053 the year of its founding, to 10,622 in 1931.

The American Association for the Advancement of Science. This Association, founded in 1848 and incorporated in 1874 for the purpose of "the advancement of science in the new world in every feasible way" has a membership of over nineteen thousand, embracing all fields of science. The Association maintains fifteen sections, representing the main current sub-

divisions of science. Each section is designated by a letter as follows: A, Mathematics; B, Physics; C, Chemistry; D, Astronomy; E, Geology and Geography; F, Zoological Sciences; G, Botanical Sciences; H, Anthropology; I, Psychology; K, Social and Economic Sciences; L, Historical and Philological Sciences; M, Engineering; N, Medical Sciences; O, Agriculture; Q, Education. The combined membership of the one-hundred twenty-four scientific organizations which are officially associated with it is in excess of a hundred fifty thousand. The associated organizations are invited to meet with the Association at all meetings. Some do so regularly, while others meet with it only occasionally. Affiliated organizations form a special group of the associated organizations and have representation on the council of the Association. These representatives form the majority of the council. On February 1, 1931, there were ninety-two officially affiliated organizations, including twenty-five affiliated academies of science, representing as many states in the United States. The American Association holds yearly winter and summer meetings and on June 15-20, 1931, held its eighty-eighth meeting at Pasadena, California.

The American Association of University Women. The American Association of University Women was founded in 1881 by Miss Marion Talbot who was graduated from the College of Liberal Arts of Boston University in 1880. Faced with social ostracism because she cut herself off from girlhood friends whose only aim in life, after the finishing school and formal début, was marriage, Miss Talbot set about determining how she could fit herself into the life of her community, how to gain the acquaintance and society of women graduates of other colleges, and how to assist in forwarding the aims and ambitions of other young women.

In November 1881, in response to a call sent out by Miss Talbot and Ellen H. Richards, seventeen women—representing eight colleges—gathered in the halls of Massachusetts Institute of Technology. From this meeting grew the Association of Collegiate Alumnae, which has been amplified and changed

from time to time until now, under the name of the American Association of University Women, the membership totals 37,393—representing 228 colleges—and composing 553 branches or chapters, eight of which are established in foreign countries. Like associations of thirty-three countries comprise the International Federation of University Women, of which the American Association is a constituent member.

The American Association of University Women is “a body corporate, for the purpose of uniting the alumnae of different institutions for practical educational work, for the collection and publication of statistical and other information concerning education, and in general for the maintenance of high standards of education.”

The national headquarters maintains a traveling library and research information service for disseminating information on topics connected with the education of women and children—from the infant to the distinguished scholar and prepares syllabi for the use of its nearly 800 study groups whose work has resulted in improvements in public education, urban and rural. The Association has aided in obtaining improvements and higher standards in the institutions represented by its members, it has helped the work of the preparatory schools, and stands in readiness to lend aid, counsel, and encouragement, as well as financial aid through fellowships and scholarships, to all who desire to fit themselves by a sound education for the duties of life.

National Congress of Parents and Teachers. The National Congress of Parents and Teachers was organized in 1897 as the National Congress of Mothers. The founders believed that mothers should take their motherhood more seriously and be better trained for it as they are the first teachers of their children. Therefore, study groups were organized among the mothers of pre-school children to consider problems related to the training of the young child. Later it was found necessary to organize the parent-teacher association as it was essential that the home, as an educational institution, keep in closest touch with the school. At this time the name of the organization was

changed to the National Congress of Mothers and Parent-Teacher Associations. Fathers now came into the organization in large numbers and in 1924 the name was changed to its present form. Today the organization has about one and one-half million members with organized branches in all states except Nevada, and in the District of Columbia and Hawaii. Its objects are: To promote child welfare in home, school, church, and community; to raise the standards of home life; to secure adequate laws for the care and protection of children; to bring into closer relation the home and the school, that parents and teachers may coöperate intelligently in the training of children; and to develop between educators and the general public such united efforts as will secure for every child the highest advantages in physical, mental, moral, and spiritual education.

World Federation of Education Associations. Early in the year of 1923 a group of the members of the National Education Association conceived the idea of extending some of the major activities of the N.E.A. to the other countries of the world. The World War had caused this group of educators to consider the possible ways by which future wars might be avoided. The majority of those interested seemed to think that a better understanding among the various peoples of the world would lead to the outlawry of war.

Developing this "better understanding," these educators reasoned, should be the business of education. With this objective in mind they asked the N.E.A. for the privilege of forming an organization which would carry the objectives of the N.E.A. into foreign countries.

The privilege was granted, and a new organization, known as The World Federation of Education Associations, was formed at San Francisco in July 1923. Augustus O. Thomas, State Superintendent of Public Instruction in Maine, has served as president of the Federation since its inception.

The San Francisco Conference was attended by about six hundred persons, and many of the nations of the world were

represented. Provisions were made for biennial meetings of the organization. It was decided to hold the first conference in 1925 at Edinburgh, Scotland.

The Edinburgh Conference indicated a vital interest in the work that the Federation had undertaken. More than two thousand educators from all parts of the world were in attendance. Committee reports were presented, and all indications were that the work of the Federation was being carried on with unexpected zeal.

The Second Biennial Conference was held at Toronto in 1927. Interest ran high. Delegations from practically all nations were in attendance. The Third Biennial Conference was held at Geneva, Switzerland, in 1929. The Fourth Biennial Conference of the Federation was held in Denver from July 27 to August 3, in 1931.

The objectives of the Federation are practically identical with those of the National Education Association, broadened, of course, to assume an international aspect. The Federation undertakes, on an international scope, the various phases of education carried on by the N.E.A. There are divisions on character, moral, and religious education, thrift education, health education, humane education, parent-teacher associations, adult education, and motion pictures. The Federation, however, has one major purpose, i.e., to develop world friendship and understanding through education. The leaders in the Federation realize that the place to launch a program with such an objective is in the schools of the various nations. They realize that children must be taught proper attitudes toward people of other lands if the principle of world friendship and understanding is to be realized. The chief work, therefore, of the Federation has been the setting up of a tentative program for the training of teachers in the desirable attitudes which children should have transmitted to them.

The effects of the work of the Federation are everywhere apparent. Textbooks are being written which emphasize world friendliness. Children are being taught the interdependence of

peoples the world over. It is hoped that through such teaching children may be given a world understanding and a friendship for other peoples which will result in the outlawry of war.

Educational Boards and Foundations. The last section of this chapter deals with educational boards and foundations. These are of recent origin in the United States of America. The Office of Education of the United States Department of Interior in the Educational Directory for 1930 lists forty-nine educational boards and foundations, exclusive of the church educational boards.

Among the more prominent of these, particularly with reference to the amount of money expended, are those established by John D. Rockefeller and his son, John D. Rockefeller, Jr., and by Andrew Carnegie. There are a number of others, however, that are doing most unusual work, and that are of particular interest to students of education. These include the Russell Sage Foundation, the Commonwealth Fund, the John Simon Guggenheim Memorial Foundation, the Albert Kahn Foundation for the Foreign Travel of American Teachers, the Julius Rosenwald Fund, and the Henry C. Frick Educational Commission. These are just a few of the educational boards and foundations that are contributing in some way to human welfare.

It will be impossible to discuss each of the forty-nine educational boards and foundations that are listed as among the most important of these organizations in the United States. Some of those whose work bears more directly on the field of teaching will be discussed briefly in the pages that follow.

General Education Board. The General Education Board was founded by Mr. John D. Rockefeller in 1902. Its object, as stated in the charter granted by Congress, is "the promotion of education within the United States of America, without distinction of race, sex, or creed." The Board may use both principal and income of its funds, and, to June 30, 1930, a total of more than \$214,000,000 had been spent or pledged, of which \$119,275,000 was from principal. The appropriations made during the year ending June 30, 1930, for all purposes, amounted to \$16,430,041.35.

To attain its general object, the Board has followed many related lines of activity, the most important of which are summarized below.

1. COLLEGES AND UNIVERSITIES. Until 1924 the Board's contributions in this field were largely for general endowment, buildings, and equipment. The present program embraces aid for the advancement of graduate study and research in the natural sciences and in the humanities; for studies, experiments, and demonstrations in the science and technique of teaching; for improvement of administrative procedures.

2. INCREASE OF SALARIES OF COLLEGE TEACHERS. In 1919, Mr. Rockefeller gave to the Board a special fund to be used, in its discretion, to assist colleges and universities (both white and negro) in increasing the salaries of their faculties. Disbursements from this fund have been completed.

3. MEDICAL EDUCATION. Between 1913 and 1929 the Board gave large sums to medical schools, chiefly with a view to enabling them to develop on a university basis, with full-time teachers in both the pre-clinical and clinical branches of medicine. This phase of the Board's activities has been discontinued.

4. PUBLIC EDUCATION IN THE SOUTH. As a preliminary step in its program of aid to public education in the South, the Board contributed to the Coöperative Farm Demonstration movement, which was designed to improve economic conditions by teaching the farmer scientific methods of agriculture. Through co-operation with state departments of education and state universities, the financing of state-wide surveys and special studies, the Board has aided in the extension and improvement of public schools, both elementary and secondary, in the rural districts of the South. At present, attention is being directed more particularly to aiding state universities and colleges in improving their facilities and methods for the training of teachers, to providing advanced study for educational leaders by means of fellowships, and to improving supervisory and administrative procedures in state departments of education through temporary support of special divisions.

5. NEGRO EDUCATION. The development of educational opportunities for negroes has been a major interest of the Board since the beginning. At present, it includes coöperation with public authorities in the South in carrying out state programs for the betterment of elementary and secondary education and for the training of teachers; aid to state normal schools and industrial, agricultural, and mechanical schools; the improvement in quality of college instruction and the development of a few university centers; aid to medical education and nurse training; fellowships for teachers in the southern states.

The Rockefeller Foundation. The Rockefeller Foundation was chartered in 1913 "to promote the well-being of mankind throughout the world." During the fifteen years thereafter, its activities took the form of (1) coöperation with governments in the control of hookworm disease, malaria, and yellow fever, and in the development of general public health organization; (2) aid in developing medical, public health, and nursing education in various centers, through appropriations toward buildings and endowments, and through fellowships, surveys, and dissemination of information on new administrative and teaching methods. The World War called for exceptional aid (\$22,000,000) for medical services, social work, and emergency relief.

On January 3, 1929, the Rockefeller Foundation and the Laura Spelman Rockefeller Memorial were consolidated, the consolidated corporation retaining the name of "The Rockefeller Foundation." The work of the new Rockefeller Foundation, which aims primarily at the advancement of knowledge, is administered under the president (1) through an international health division, and (2) through four directors, one each for the natural, the medical, and the social sciences, and the humanities.

Except to a limited degree in public health, the Foundation is not an operating or research agency. It gives assistance, both directly and through aid in the training of personnel, to universities and other agencies carrying on research of a fundamental character in the five fields in which its interests center

at present; and in addition coöperates with governments in the development of general public health activities and in the study and control of certain diseases.

The Foundation's work is not limited to any given country. In 1930, in expending approximately \$16,500,000, it coöperated with more than fifty foreign countries, either through government or through contributions to universities, institutions, or organizations. Since 1913 it has disbursed approximately \$180,000,000. Capital funds December 31, 1929 were approximately \$147,000,000.

Carnegie Foundation for the Advancement of Teaching. The federal act of incorporation of the Foundation was approved March 10, 1906. Its original board of trustees included Dr. Henry S. Pritchett, President of the Foundation until August 1, 1930, Charles William Eliot, Arthur T. Hadley, Nicholas Murray Butler, Woodrow Wilson, and Jacob Gould Schurman. Dr. Pritchett was succeeded by Dr. Henry Suzzallo, formerly President of the University of Washington, who at the time of his accession to the presidency of the Foundation was Director of President Hoover's National Advisory Committee on Education.

According to the charter of the Foundation, the general purposes of the endowment are two: first to provide retiring allowances for teachers of universities, colleges, and technical schools in the United States, the Dominion of Canada, and Newfoundland, upon such terms and conditions as the corporation may from time to time approve and adopt; and secondly, in general, to do and perform all things necessary to encourage, uphold, and dignify the profession of the teacher and the cause of higher education in the countries specified. Under certain conditions, the trustees may enlarge or vary these two purposes within the limits of the charter.

In the course of its existence the Foundation has paid more than \$20,361,800 in retiring allowances and widows' pensions in colleges and universities. It has also issued twenty-five annual reports, twenty-five bulletins, and about two score of smaller publications, amounting in all to some ten thousand

pages. Of the bulletins, the second (1908) dealt with the financial status of the professor in America and Germany. The ninth (1915-16) set forth a comprehensive plan of insurance and annuities for college teachers, and summarized the experience of the Foundation in the field of teachers' pensions. Bulletins twelve (1918), seventeen (1926), and twenty-two (1928), reported upon retirement plans for public school teachers in Vermont, Virginia, and Colorado, respectively. Bulletin number four (1910) dealt with medical education in the United States and Canada, and number six (1912) with medical education in Europe. Common law and the case method in American university law schools was treated in bulletin number eight (1914), followed (1919) by bulletin number thirteen concerning justice and the poor, number fifteen (1921) on training for the public profession of the law, and number twenty-one (1928) on present-day law schools in the United States and Canada. Bulletin number fourteen (1920) dealt with the professional preparation of teachers for American public schools, number sixteen (1922) with education in the maritime provinces of Canada, and number twenty (1927) with the quality of the educational process in the United States and Europe. Three bulletins, numbers eighteen (1927), twenty-three (1929), and twenty-four (1929), treated respectively games and sports in British schools and universities, American college athletics, and the literature of the subject.

Sections in the annual reports of the Foundation have dealt at length with these and related matters.

Mr. Andrew Carnegie, during his lifetime, provided the Foundation with permanent funds totaling \$16,250,000. On June 30, 1930, the permanent funds of the Foundation included a general endowment of \$16,801,000, and the endowment of the Division of Educational Enquiry of \$1,270,000, which, together with reserves for various purposes of \$14,079,500, showed total resources of \$32,150,500.

John Simon Guggenheim Memorial Foundation. The John Simon Guggenheim Memorial Foundation was organized in

1925 with the expressed purpose of improving "the quality of education and the practice of the arts and professions in the United States, to foster research, and to provide for the cause of better international understanding." It was established by Senator and Mrs. Guggenheim as a memorial to a son who died April 26, 1922. It offers a limited number of fellowships for study abroad, for research in any field of knowledge, and for creative work in any of the fine arts, including music. The Foundation plans to maintain annually approximately sixty fellowships with a value of not to exceed \$2,500 for a period of twelve months. These fellowships are maintained for men and women of high intellectual and personal qualifications who have already demonstrated unusual capacity for productive scholarship or unusual creative ability in the fine arts. The fellowships are open to men and women normally of ages between twenty-five and forty years. They are available to citizens of the United States or, in exceptional cases, to permanent residents who are not citizens, irrespective of race, color, or creed. The tenure of the fellowship is usually adjusted to the purpose and scope of the studies of each individual. Appointments ordinarily are made for one year, but plans which involve two or three years' work will be considered by the trustees. In special cases the trustees will grant fellowships for terms shorter than one year, with appropriate stipends. Members of the teaching profession who have received sabbatical leave are eligible for appointment. The balance sheet of the John Simon Guggenheim Memorial Foundation as of December 31, 1930, showed assets of \$4,849,430.82. The grants made in the five-year period following the organization of the Foundation in 1925 totaled approximately \$1,000,000.

The Albert Kahn Foundation for the Foreign Travel of American Teachers. The object of this Foundation is to enable men of proved intellectual attainments to enjoy during one year or more sufficient leisure and freedom from all professional pursuits or preoccupations, to enter into personal contact with men and countries they might otherwise never have known.

To accomplish this purpose, the Foundation awards traveling fellowships with a value of \$5,000 each. These fellowships are awarded preferably to persons between the ages of thirty and forty. Under the Foundation, the fellowships are to be awarded preferably to professors in American colleges or universities, but the trustees may at any time or from time to time select a beneficiary who shall not be a professor in an American college or university, but whose attainments, natural qualifications, or recommendations as scholar or investigator shall commend him to the trustees. The trustees have the power to prescribe the itinerary of any traveler to whom they award a fellowship. The recipient of the award is obligated to furnish to the trustees a report containing the impressions and results of his travels, this report not to exceed fifty printed pages. The reports submitted by the fellowship holders may be published by the trustees if they deem them worthy, the expense of such publication to be paid by the trust fund, or by the founder at his own expense.

The Russell Sage Foundation. The Russell Sage Foundation was established by Mrs. Russell Sage in 1907 in memory of her husband. The initial endowment was \$10,000,000. In her will Mrs. Sage left an additional \$5,000,000 to the Foundation. The management of the Foundation is in the hands of a self-perpetuating board of trustees of nine members. The charter of the corporation states its purpose as being "for the improvement of social and living conditions in the United States of America." The charter further states, "It shall be within the purposes of said corporation to use any means to that end which from time to time shall seem expedient to its members or trustees, including research, publication, education, the establishment and maintenance of charitable or benevolent activities, agencies and institutions, and the aid of any such activities, agencies or institutions already established."

The staff of the Foundation may use only the income. The endowment must be kept intact. This Foundation has done much helpful work in studying social conditions and methods

of social work, and in making available its findings through publications, conferences, and other means. It is a great force in stimulating conditions for social betterment.

QUESTIONS AND EXERCISES

1. Why do some institutions attempt to procure chapters of honor and professional societies?
2. Some institutions will not allow honor or professional societies to install chapters. What reasons do they offer for this attitude?
3. What honor societies have chapters at the institution in which you are studying?
4. What are the honor societies at your institution in which you will have an opportunity to attain membership?
5. Name the educational organizations to which the following should belong:
 - a. An elementary teacher.
 - b. A high school teacher.
 - c. An elementary school principal.
 - d. A high school principal.
 - e. An elementary supervisor.
 - f. A high school supervisor.
 - g. A superintendent of schools.
6. Have any of the educational boards or foundations ever given any help to the institution you are attending? to any other educational work in your state?
7. Generally speaking, on what basis do the educational boards and foundations offer assistance to worthy institutions?
8. Has any institution ever refused a gift from one of the educational boards or foundations? If so, on what basis was it refused?
9. What are some of the major activities attempted in the United States by the educational boards and foundations? in foreign lands?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XXIII

PHILOSOPHY OF EDUCATION

How living things differ from inanimate things. Living things differ from inanimate things in the sense that they grow through resisting their environment. The only exception to this is when the resistance of the environment becomes so great that the individual is crushed, but even in such cases there is something about the living organism that makes it attempt to resist as long as it can. We do not find this true of inanimate things. For example, a steel girder supporting a heavy bridge is no stronger from having done so. There is nothing in the process it has passed through that causes it to grow. It does not get back more than it gives. In fact it is reasonable to assume that it gets back less than it gives since it is gradually weakened in the process of supporting the weight.

On the other hand a living thing always tends to resist its environment and grows as a result of this resistance. The fact that it grows in the process of resisting its environment means that in some way it gets back more than it gives. This process of renewing, resisting, and growing, however, cannot be kept up indefinitely. Eventually the resistance of the environment becomes too great, the living thing gets back less than it gives and consequently dies. The individual's accomplishments in life, therefore, cannot be everlastingly perpetuated by himself, but must be passed on to younger hands. It is the business of education to pass on these accomplishments and accumulated racial experiences in a way that will cause the individual to grow most efficiently.

Since a living thing grows by resisting its environment, it should, to grow best, be placed in an environment where vary-

ing stimuli are calling out varying responses. An unchanging stimulus or situation would be deadening to a living organism. Stimulus and response are essential factors in growth and they are just as important in the mental realm as in the physical realm. Men in the temperate zones grow intellectually in resisting their environment because they are constantly resisting a changing environment, while men in a torrid climate grow and advance less intellectually because the environment they resist is more or less a static one.

How learning takes place. That one grows mentally by responding to stimuli may be seen from the biologic make-up of the organism. The nervous system is composed of millions of smaller bodies called neurones. The three major parts of a neurone are the body, a receiving end with long branches called a dendrite, and a long central cord called an axone. A clear view of the nervous system would show the end of the axone on one neurone in close proximity to the dendrite of another neurone. The axone and dendrite do not actually touch but instead are slightly separated by a small gap called the synapse. When a stimulus comes in contact with a sense organ it initiates an impulse that runs over the neurones. This impulse always travels from the neurone body over the axone and then apparently jumps across the synapse and is received by the dendrite. This jumping of the impulse over the synapse tends to shorten it so that the next time the stimulus occurs the response will come a little more easily and surely since it is not necessary for the impulse to jump such a wide gap. This change in the synapse is what we really refer to when we speak of learning. Reasoning biologically, then, it appears that learning means nothing more than changing the path among the neurones so as to hook up different responses and stimuli. It is a breaking down of the resistance to the impulse. Or it may be said that learning has taken place when some movements are more likely and others less likely to happen again. Consequently it may be said that at any time an organism responds to a stimulus it tends to learn, or to change, since there will always be some

change made in one or more of the synapses of the nervous system. Nothing like this occurs in the steel girder. It does not grow in a changing environment nor is it dissatisfied in a static one. Therefore it would be well to remember that one characteristic which living things have that inanimate things do not have is this power or ability to grow through the process of responding to stimuli.

The inherited equipment of the individual. The nervous system is so constituted that certain responses of the individual will always remain very much the same when the stimulus is given. It is very difficult for the individual to have any control over them. Such responses we say are inherited. A reflex, for example, as typified in the knee jerk, is a motor response to a sensory stimulus. It is deep-seated in the organism and highly essential to its welfare but it is involuntary and often unconscious. It is almost impossible to control it, yet it is always ready for action and in this way contributes to the growth and preservation of the organism.

Another part of our inherited equipment is the instincts. Instincts are native and may be thought of as tendencies to act in a certain way under certain conditions. Instinct is inborn capacity for purposeful action. While there is a young and probably growing group of psychologists that tend to deny the theory of instincts, it is probable that it is more a question of terms than an entirely different concept of ideas. At any rate for our purpose we can retain the term instinct.

Expressions of instincts reveal many responses that are surely native since many of them are expressed when there has been no opportunity to learn. The new born child breathes, cries, stretches, sucks, grasps, and responds in many other ways that could hardly be classed as anything else than native. When birds are old enough and mature enough to fly they will fly without having practiced or seen any other birds fly. But while the instincts are native they are not so uncontrollable as the reflex. Education can do much to guide and direct them and eventually build up substitute responses.

A third type of equipment that the child brings into the world with him is his capacities. We need not concern ourselves with capacities here except to say that they are a part of the native equipment and are usually thought of as general mental abilities rather than specific motor responses.

How man differs from other animals. It is of course self-evident that the native equipment of the individual is the foundation upon which education must build and that all growth is conditioned by this equipment. In fact, some psychologists go so far as to say that instinctive action is the key to any understanding of human behavior. Although this may be true, it should be kept in mind that all living animals do not seem to grow or profit by their experience in the sense that they can avoid mistakes by having made a similar mistake before. For example, a butterfly will fly through a fire, then retreat, and fly through again. It seems incapable of profiting by its previous mistake. On the other hand a child who sticks its hand against a hot stove will probably not do so again if it can help it. One mistake is enough and one experience is enough for the average child to learn much.

It appears, then, that while all living things grow through resisting their environment, it is only in some of the animals that a response to a stimulus can actually be used to guide future conduct. In general it is thought that educability (the ability to profit by individual past experience) is limited to the vertebrates. If this be true it is very probable that through the process of evolution, many animals not now thought educable may become so in the future.

Another difference among animals that seems to have much significance for education is the varying length of the period of infancy. The human being has the longest period of infancy and seems the most helpless of all the animals. For example, the colt within a very few hours after birth can walk, run, and perform most of the physical activities of the mother. On the other hand it has been said that when it comes to art, speech, philosophy, and reasoning, the new born babe is hardly the peer

of the new born beast. But while the babe comes into the world weak physically and weak mentally, his capacity for complex growth excels that of any of the other animals. It would not be possible for any organism to come into the world so perfected and full grown as the colt and yet have the marvelous capacities for development which are possessed by the human infant. Looked at from this point of view it will be seen that immaturity is not a handicap but a help. As Dewey has said, "The great advantage of immaturity, educationally speaking, is that it enables us to emancipate the young from the need of dwelling in an outgrown past."¹ In other words, while the babe is actually least powerful he is potentially most powerful of all infants in the animal kingdom. This potentiality is of the greatest importance from the standpoint of education. The longer the period of infancy, the greater the need for education.

The human family, then, is not only the most capable of being educated but in it we find the greatest need for education. It is generally conceded that man is superior² to all other animals and that he is expected to act as his own guide and at the same time act as guide in shaping the destiny of all the other animals. But man cannot guide his own destiny and that of the lower animals intelligently unless there is some process of carrying over his accumulated experiences to the younger generations. Man must die as all other living organisms. Younger hands must take up the work and if we would have these new helpers avoid the mistakes made by the older ones, it is essential that the accumulated knowledge be passed on. This is done through education. It is education that bridges the gap between immaturity and maturity. It is by means of education that each generation is enabled, in part at least, to avoid the mistakes of preceding generations.

¹ Dewey, John, *Democracy and Education*, The Macmillan Company, 1916, page 85.

² It is conceivable that man may not be superior to all other animals. Man has only his own word for it. He has never asked the other animals what they think about it.

Social and Biological Heredity. While the educative process is one way of making progress it is not of course the only way. Heredity is of two types: social heredity, where the experience of the race is utilized, and biologic heredity, where the race is improved through a selected germ plasm. In general it may be said that nature herself is tending all the time to improve the race since there is always a tendency in nature to cut off or kill off the weaker strains through a process of the survival of the most fit. Much is being done today to improve the race through biological heredity. Laws are being passed to prevent the propagation of the unfit, and a science of eugenics has been developed. But no amount of knowledge concerning the laws of biologic heredity can ever replace the need for education or the necessity of our social heritage. Indeed we may look upon experience as the basis of everything. "Man has nothing at all but experience, and everything he comes to, he comes to only through experience. All his thinking, be it loose or scientific, common or transcendental, starts from experience ultimately in view. Nothing has unconditional value and significance except life. All other thinking, conception, knowledge, has value only in so far as in some way or other it refers to the fact of life, starts from it, and has in view a subsequent return to it."¹

Formal and Informal Education. Education may be of two kinds: (1) formal education, and (2) informal education. We think of informal education as the knowledge, attitudes, and ideals, which an individual acquires in life incidentally. Many years ago most education was of the informal kind. The boy learned to plow and the girl learned to sew, not so much in a conscious attempt to learn these things but rather as one of the incidental parts of life's experiences. The activities of life when informal education reigned supreme were far simpler than they are now. The problems were not so complex that it was impossible then for the child to learn incidentally the things

¹ Fichte, *Werke*, Volume 2, page 333. (Quoted from Kilpatrick, William H., *Source Book in the Philosophy of Education*, The Macmillan Company, 1923, page 19.)

that were going on because he could see them and participate in them. It seems quite certain that when informal education was the only kind of education it was a more efficient method of teaching what was expected than is our modern formal method of teaching today. Children in that day learned a large part of what they were expected to learn just by participating in the life of their day. Not nearly so great a part of what is expected to be learned today can be so learned. Therefore this type of education, education through experience, has many advantages but it also has some disadvantages. It has the advantage of being effective, and will be more likely to function in life than if learned formally. It is usually accompanied by a strong, impelling motive. On the other hand it is a haphazard type of education. Since it is not selective, it is naturally uneconomical and a slow process. If an individual were assured of a long life (say 1,000 years) this wasteful process of learning would not be so serious, but when he must learn with the expectation of living only a little more than fifty years, extravagance with time through an unsystematized process becomes a serious business. In fact, one may say that such an unsystematized process as is carried on through informal education cannot be effective in itself when the things to be learned become complex and extensive.

Formal education is a conscious and usually well-planned process. Whereas informal education may leave the individual in an environment that makes education all but impossible, formal education will often so change the environment that it becomes an aid to education instead of a hindrance. Formal education, being purposive, is naturally selective. It selects, out of all the accumulated experiences of the race, those experiences that are thought to be best for the promotion of the individual and the race. Consequently we may say that formal education is more economical than informal education, since time is not wasted in learning so many useless things nor in failing to profit by racial experiences. In formal education one does not actually have to experience the activity in order to

learn. Direct personal experience cannot be provided on a mammoth scale and even if it could, it could not replace the need for the vicarious experiences which can be satisfied by good schools and competent teachers. When we have schools, textbooks, and teachers, it is not necessary to visit Africa in order to have a good conception of life in Africa or to participate in the World War in order to appreciate its magnitude.

The School Is an Important Agency in Education. The chief institutions for carrying on formal education are the family, the school, and the church. It is the school that we look to as the most important agency for selecting and teaching those experiences of the race which are considered of most worth. "To an extent characteristic of no other institution, save that of the State itself, the school has power to modify the social order." ¹

As evidence of this it may be noted that many of the functions which used to be carried on by the home and the church are now being passed over to the school. That a grave responsibility rests on the schools in our country as educative agencies may be seen when we reflect on the importance of education in a democracy. Education is our most valuable form of capital. Some of the most expensive and important forms of saving are of an intangible type, such as the accumulated scientific knowledges.

In a country where only a select few have a chance to rule and govern and where leadership is decided by right of birth it is not so essential that every individual be educated. It is of course very essential that a few be educated in order to have a sufficient number of leaders. European countries think of the racial heritage as something to be preciously guarded and as a result the masses have not had an opportunity to be educated as they have in the United States. However, there is some evidence for believing that the European countries are turning

¹ Dewey, John, *Moral Principles in Education*, Houghton Mifflin Company, 1909, page 5.

out leaders in greater proportion than is the United States. Nobel Prizes were first awarded in 1901. From that date to 1931 one hundred fifty-one such prizes had been awarded. They have been distributed to countries as follows: ¹

COUNTRY	NUMBER RECEIVED	COUNTRY	NUMBER RECEIVED
Germany	34	Denmark	6
France	23	Austria	5
Great Britain	22	Norway	5
United States	12	Belgium	4
Sweden	11	Italy	4
Switzerland	8	Spain	4
The Netherlands	8	Others	5

It will be noticed that Germany has won one prize for each two millions of its people but the United States has won only one for about every ten millions. Should we conclude from this that we are spreading our education too much and that it would be better to lavish it on only a relatively few as some of the European countries do. We do not believe so.

In a democracy the ideal is equality of opportunity. This does not mean lavishing all attention on those at the low end of the intelligence scale. Equality of opportunity means adapting the schoolroom situation so that conditions fit one pupil as well as any other. In a democracy it is possible for anyone with the capacity, the education, and the talent, to lead; and of course all citizens capable of casting a vote are expected to express their choice in the selection of leaders. Since, then, all the citizens can take part in the selection of their leaders, it is highly important that each express his choice intelligently. If democracy would save itself from the demagogue, let each one in its electorate vote wisely. In a democracy, therefore, we cannot be content with selecting a few and educating them for leadership with the idea that the remaining group can be told what to do. Instead all must be educated. Looked at from this standpoint it is probably safe to say that a democracy puts a greater responsibility on its schools than does any other type of government.

¹ *The World Almanac*. The New York World, 1931, page 213.

Education an Adjustment. Education is as old as mankind. In all periods of human existence the immature have had to pass through an assimilation process which was intended to prepare them for participation in the group. The assumption that the young are not naturally fitted for full participation in the group activity has always existed. Hence the need for education in order that the individual may be a sharer of, a participator in, and a contributor to the group. The school, the chief educational agency, has never been satisfied with preparation of the individual for the group as it is. It has always wanted to prepare the individual for the group as it should be. Hence the individual is not only to be prepared to live in the group as it is but also he is to change the group so that it will be better for his having lived in it. For this reason we often refer to education as an adjustment process, that is, the power to adjust oneself to the new environment and also the ability to adjust the environment for the best growth of the individual.

What Is Philosophy of Education? Philosophy as such does not have an array of facts and data of its own, nor is it the business of philosophy to go out and get new facts. The business of philosophy is to take the facts as they exist in other fields and try to view them as a comprehensive whole so that it may read meaning into the whole as well as into the different parts. Philosophy is one of the most comprehensive studies one can undertake. It has been defined as the cultural study of meanings and values and has sometimes been called the interpretation of life. Matthew Arnold has said that "Philosophy is the attempt to see life steadily and to see it whole."¹ One of the earliest definitions of philosophy stated that it was "the science of the sciences." Just as the physicist is seeking for the principles that underlie physics, the botanist for the principles that underlie botany, and the chemist for the principles upon which chemistry must rest, so the philosopher is in search

¹ Patrick, G. T. W., *Introduction to Philosophy*, Houghton Mifflin Company, 1924, page 1.

of the principles upon which the various principles of each individual science must rest. Hence the definition, "the science of the sciences." Philosophers today do not expect or even hope that such principles will ever be discovered and even if they were, it would not shed much light on the big problem of philosophy, namely, the meaning of life. The distinction between science and philosophy may be best seen in the following quotation:

To science no object is independent. Each depends on every other and dependence (relativity) is the controlling principle of the universe. There remains, however, that still higher plane upon which the universe appears as a self-dependent, self-related, self-active totality. It is on this plane that philosophy lives and moves and has its being, and on this plane that art and music and literature find the inspiration and the motive of those insights, aspirations, and intuitions which pave the path to beauty.¹

Just as philosophy attempts to answer the question—what is the meaning of life?—so educational philosophy hopes to answer the question—what is the meaning of education? The most recent and perhaps most common attempt to answer this latter question, what does education mean, is to define education in terms of the growth idea. The writings of John Dewey, Teachers College, Columbia University and more recently the writings of such educational philosophers as William H. Kilpatrick of the same institution, and Boyd H. Bode of Ohio State University have doubtless tied the growth idea to education so strongly that for a long time to come the meaning of education will be explained by most teachers in terms of growth. Growth as an explanation of the meaning of education is of course used in a broad sense. From an intellectual standpoint Dr. Dewey² refers to it as a constant expansion of horizons and consequent formation of new purposes and new responses. Intellectual growth as just defined necessarily must be accompanied by openmindedness. It means that the experi-

¹ *Annual Report* of President Nicholas Murray Butler, Columbia University, 1927, page 29.

² Dewey, John, *Democracy and Education*, The Macmillan Company, 1916, page 206.

ences of the individual and the experiences of the race must constantly be reorganized, changed, reconstructed. In growth there is a constant process of adjustment. There is a gradual moving from immaturity to maturity, a taking care of the ever present which will in turn take care of the future. A concept of education that would always take care of the present might well endorse the philosophy involved in the statement:

Don't worry about the future,
The present is all thou hast;
The future will soon be present
And the present will soon be past.

How the growth idea affects the educative process. There are many ways in which the growth idea in education will influence the educative process. From the standpoint of the curriculum it ought to make it more dynamic. The most efficient growth will not permit of a violation of the law of apperception. In growth we must continually move from where we are to where we are not. Growth cannot occur efficiently if we take as our starting point some terminal outside of the individual. We must continually pass from the known to the unknown. The growth concept, then, ought to be instrumental in bringing into existence a curriculum that is more practical and one that is more carefully graded to suit the varying levels of intelligence of school children. When the growth idea of education is thoroughly understood, textbook writers will be more careful in their selection of words which are used in the textbooks. Doubtless every reader of this chapter can recall times when certain words used in the textbooks made many sentences meaningless. This ought not to be. The growth idea carries with it the conception of a gradual passing, not an abrupt passing from the known to the unknown. It seems quite possible that we can look forward to the time when the concept of growth in education will make textbooks more readable, and better adapted to the different intelligence levels of children.

The growth concept ought also to affect materially the content of the curriculum. It should be the means of bringing

about a more functional type of courses of study, and a curriculum that has more of the practical and less of the traditional material. One can easily see also how the growth idea in education will affect methods of teaching. To grow one must act, participate, and share in the process. The most efficient growth involves whole-hearted interest in what one is doing. Consequently one can easily conceive of the time when teachers will become confidants, counselors, and guides and when pupils will participate more, with each individual working at his own pace and on his own projects.

The growth concept should aid in interpreting education more specifically in terms of life. One criticism of the school today is that its activities are so far removed from life that it is difficult to hold the interest of the pupil. Pupils too frequently have a feeling that many of the things being taught will be of no real value outside of the schoolroom. As a result they work half-heartedly and with a divided attention. The most efficient growth involves whole-hearted purpose, a united interest, and a strong will to do.

The growth concept in education means not only that the individual will grow in the mastery of knowledge, facts, and in the achievements in the curriculum but also that there will be an increase in the number of things in which he is interested, and an increase in the length of time he can give sustained attention to a task at hand. A more fully developed individual can form longer range plans and more complex ones than can one who is less well developed. One grows in his ability to deliberate, in his power to utilize the facts he already knows, and in his tolerance of and sympathy toward others. Growth involves the idea of being dissatisfied with things as they are and the idea of attempting always to move forward. The ultimate end of growth is more growth, better control over our purposes, an enlargement of points of view, and a greater insight into meanings.

It is readily seen that the task which educational philosophy has undertaken, namely, to answer the question, what is the meaning

of education, is a task that is surcharged with educational influences. On the answer to this question hinges the whole future of education, the big aims in education, the means of control for reaching these aims, and the methods involved in the teaching process.

It seems, however, that as long as we hold to the growth concept in education, we need have no fear that education will become static. It can no more remain fixed than civilization can remain fixed.

Two points of view relative to our philosophy of education. To those who read the literature in educational philosophy today there seem to be two somewhat opposing views of thought expressed. The first view has just been presented as a concept of growth. This concept of a philosophy of education seems almost identical to a general theory of education. Dr. Dewey is perhaps the most ardent advocate of this view. This view looks upon philosophy as a study of conflicts and educational philosophy as a study of educational conflicts.

In the general-education-theory view the child is the center of interest. This view is marked by its desire to teach children rather than subjects. It leans heavily on the behavioristic psychology, and puts much stress on the stimulus and response theory. Environment counts for much since it can be varied and thus present a different set of stimuli and call forth different responses. The young assimilate the point of view of the old by a shift in the environment so as to call out the needed or desired responses. As Dewey expressed it:

The required beliefs cannot be hammered in; the needed attitudes cannot be plastered on. But the particular medium in which an individual exists leads him to see and feel one thing rather than another; it leads him to have certain plans in order that he may act successfully with others; it strengthens some beliefs and weakens others as a condition of winning the approval of others. Thus it gradually produces in him a certain system of behavior, a certain disposition of action.¹

¹ Dewey, John, *Democracy and Education*, The Macmillan Company, 1916, page 13.

The general-education-theory of philosophy of education is strongly dependent on the findings of experimental education. It thinks much of the term "creative education" and self-expression. Holding to the concept of growth it would have children learn racial experiences when there is a *felt need* for them. It has little of the stored-up idea of preparation for adulthood. Rather it would hold that a preparation of childhood, a taking care of the present, is a preparation for adulthood. The intrinsic value of subject matter plays a strong part. The whole personality is to be developed. Education is subject to nothing except more education; activity leads only to further activity; Latin is studied in order to know more Latin.

Barriers between individuals and social groups are to be broken down. Individuals are to have full freedom to interact, and in a democratic education at least, provision is to be made for participation of its members on equal terms.

The other view of educational philosophy undertakes an intellectual interpretation of the meaning of education in relation to the whole of reality. This view is sometimes referred to as that of idealism, and recognizes a power as working in an individual that is not a part of himself. This type of educational philosophy is marked all the way through by reliance on the Absolute as well as self. From this standpoint education becomes a means of reaching ideals.¹

The idealistic theory of educational philosophy considers only mildly the pragmatic theory of Dr. William James. The truthfulness of a theory does not depend on whether it will work or not, but instead, truth is looked upon as eternal; once true, always true, regardless of environment and regardless of whether it works or not. The idealistic view considers everything of some value. The general-education-theory point of view would use man's wants as one of the measures of these values. According to the latter view the fact that a child will respond to a thing eagerly and interestedly is some indication

¹ Horne, Herman, *The Philosophy of Education, Revised Edition*, Chapter IX, The Macmillan Company, 1927, pages 288-317.

that the thing is good. The very fact that he responds to it is evidence that there is a felt need for that experience and such a felt need or worth may give it value.

The idealist, however, according to Dr. Horne, will set up certain ideals to be reached and then arrange his subjects according to what he considers the greatest value in reaching these ideals. Thus some experiences are considered of much greater value than others. The idealist as found today believes in practical education but he also believes in culture and knowledge for the sake of knowledge. As Dr. Horne has expressed it, "The conception of education is bigger than the conception of culture at work; it is the conception of culture at both work and play."¹

Each of these conflicting philosophies of education have points of strength and perhaps points of weakness. Each theory is like almost everything else in life; if carried to the extreme it becomes a dangerous ground on which to stand. Self-denial is a good thing as a very valuable discipline and training at times, but if carried to the extreme it becomes dangerous. Freedom of the individual to act as he wishes is desirable up to a certain point but if carried to the extreme, so that the individual is accomplishing nothing or is constantly interfering with the rights of others, it becomes harmful. Somewhere between the extremes of almost any of life's experiences is a balance that will prove more satisfactory in the long run than either of the extremes. The general-education and pragmatic-theory of philosophy of education has the advantage of being practical and of giving strong weight to the effect of environment. It recognizes interest, not as a thing that is inherent and fixed, but a varying thing that can be guided, influenced, and changed by a change in environment.

It is possible for the mind to develop interest in a routine or mechanical procedure, if conditions are continually supplied which demand that mode of operation and preclude any other sort. I frequently hear dulling devices and empty exercises defended and

¹ *Ibid.*, page 312.

extolled because "the children take such an 'interest' in them." Yes, that is the worst of it; the mind, shut out from worthy employ and missing the taste of adequate performance, comes down to the level of that which is left to it to know and do.¹

In other words, interest will depend on the stimuli that are causing the stirring within. Some think there is danger, however, that the general-education-theory doctrine may become too much of a vocational idea. That every individual ought to be trained for a vocation so that he can make his own way in the world, and at the same time contribute something to those unfortunate individuals that must be helped in society, cannot be questioned. However, one's training must be much broader than this. The number of hours that man lives away from his work is gradually increasing and bids fair to continue to increase. As man spends more and more of his life in leisure and at his avocation, more and more he will need culture that is broader than his vocation. The moral, the esthetic, the leisure, and the cultural objectives must be met quite as well as the vocational objective.

On the other hand the critics of the idealistic theory claim that it is in danger of becoming too visionary and too theoretical. It is based on the idea of the superiority of the mind over body, and as the stimulus-response psychology forges to the front, and as we tend more and more in the direction of treating mind and body as one, it is becoming increasingly difficult to defend the theory of idealism. Moreover, some of the strongest claims the idealist has advocated for his theory are gradually being weakened by the broader interpretation that is being put on pragmatism. Dr. William James, one of the strongest proponents of the pragmatic theory, put great stress on the venture of faith and the will to believe. He believed it "better to yield to the hope that religion may be true than to yield to the fear that it may be false, since yield we must to the one or the other."

If, then, we can look forward to the time when the general-

¹ Dewey, John, *The Child and the Curriculum*, University of Chicago Press, 1902, page 35.

education-theory conception of philosophy of education can absorb the greater part of the idealists' platform and make ample room for culture in the avocation as well as in the vocation, adapt a belief in some things for their own sake, and recognize that there is a place for thought of the Deity, the Infinite, and the Eternal, then we may have the balance between the two theories, that some people claim is needed.

Such a conception of philosophy of education will be parallel with a general theory of education, it will stress "creative" education, it will recognize the value of the stimulus-response psychology, it will give due weight to both heredity and environment, it will endorse a culture so broad that it will cover all periods of life, it will recognize a place for reflection on the Infinite, and will leave room for a belief in the Eternal. The concept of growth will have a broader meaning than it has ever had before. If such a time comes, we may be sure that our conception of education will be broader than it has ever been. Until such a conception of education does arrive, the student of philosophy of education may rest assured that we are gradually progressing toward a more definite, clear-cut definition of the philosophy of education, and that some time in the future the question, what does education mean, may be answered in terms and meanings on which we can all agree.

QUESTIONS AND EXERCISES

1. If the average life span was 150 years, how might our schools be different?
2. Is man's life prolonged proportionately as he is able to overcome his environment? Is it possible that man may some time have such complete control over his environment that he will never die? Discuss.
3. How do the instincts in man differ from those in the lower animals?
4. Are all men created equal? In what respects?
5. Is man born a social being? Anti-social? Neither?
6. How does one know when learning has taken place?
7. Do the animals lower than man profit by their past experiences? In what sense?
8. Why in the human family do we have such a long period of infancy? Just what does this fact hold for education?

9. List the advantages and disadvantages of formal education.
10. Give illustrations to show that education is an adjustment process.
11. Just what does the word "growth" in education mean to you? Does it appear to you that education should be primarily centered on childhood or adulthood? Justify your answer.
12. Who in your opinion is best prepared to tell us what our philosophy of education ought to be? To what extent is the crime wave in this country a result of our philosophy of education?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XXIV

OBJECTIVES IN EDUCATION

It is probably a fair statement to say that the two most important questions with which educators have to deal today are:

1. What are the aims or objectives of education?
2. What is the curriculum, or what are the experiences and activities which are necessary for the individual to pass through in his attempt to reach the objectives?

In this chapter the chief items of concern will be the aims or objectives of education. The curriculum will be the subject for discussion in Chapters XXV and XXVI.

What Do We Mean by Aims or Objectives in Education?
The word aim, itself, is somewhat in question as it is used in education today. There seems to be a growing tendency at present to speak of the larger goals of education as objectives rather than as aims. In this study we shall apply the term ultimate objectives to the major goals of the educative process and the term specific objectives to the more immediate goals that must be reached as one traverses the roads to the ultimate objectives. The word aim may then be thought of as the purpose, desire, or intent to reach the various goals. If one wished to use a rough analogy as an explanation of the word aim he might think of a boy practicing with a rifle. The boy's aim is to hit the target; the target is the ultimate objective. The target determines the direction in which he points the gun and it is the gauge by which he estimates the distance the gun shall be elevated or lowered. His aim is not the target but it is to hit the target. What his aim is can best be answered by stating what his wishes, or desires, or purposes are at the time.

Looked at in this way it will not be necessary to refer to the term aim so frequently in this chapter, for it can be assumed that the purpose or aim of a people at any time is to reach as quickly and efficiently as possible the ultimate objectives which they have set up.

Why Definite Educational Objectives Are Necessary.—*Educational objectives serve as guides in educational procedures.* It is possible that some progress could be made without definite objectives in mind but the chances for progress are greatly reduced. If an individual wishes to reach a certain city and starts out without making any inquiries and without having any idea as to which way to start, there is always a possibility that he will reach his destination; but the number of chances that he will go the wrong way are almost infinite when compared to the one chance that he will go the right way. Few great pieces of work have ever been done unless the worker at first had in mind a definite goal to be reached. This can be seen in every phase of human progress. Before a house is started the architect prepares a blue print showing how every part of the house from cellar to garret will look when completed. The contractor knows almost to a cubic yard the amount of dirt to be moved, almost to a foot the amount of lumber needed, to a square yard the amount of plastering he will have to do, and rather accurately the probable number of hours of labor that will be required to complete the whole structure. Before a bridge is constructed someone has visualized it to the minutest detail. There is no guesswork about what is to be done. Contractors who construct great steel bridges do not guess what they will look like when they get them completed; they do not guess how many steel girders or rails will be needed. They *know* all this before they start. Even the farmer who plants corn does not guess at getting the rows straight. Before he starts his first row he focuses his eye on a tree, a fence post or some other object that may serve as a guide and then aims at this in the same way that the boy with the rifle aims at the target. Just as the target determines the amount which the boy will lower

or elevate the gun, so will the fence post or the tree determine whether the farmer will move to the right or to the left in planting the corn row. So it is through all life's activities. Some great inventions and discoveries in science have been found apparently by accident and without conscious design but such cases are very few. It is probable that most inventions have been more or less the products of conscious attempts.

Just as the railroad engineer in building a railroad has definite ultimate objectives in mind as well as the more immediate objectives for reaching them, so should the educational engineer know the final ultimate goals of education as well as the more immediate ones. While the need for definite goals or objectives in education is just as great as for civil engineering, it will readily be seen that the accuracy with which one can determine educational goals and the precision with which he can measure progress toward them are not as refined as those of civil engineering. Educational objectives are determined and estimated on the basis of changes in human life, while the civil engineer makes most of his estimates on the basis of changes in inanimate things. In estimating educational goals and attempting to measure progress, one is dealing with changes in life; while in building bridges, one is dealing with changes in physical objects. Of course, physical measurements are not absolutely accurate. A steel rail is not the same length today as it is tomorrow, and one can scarcely find two yardsticks that are the same length. Long railroad bridges may vary as much as two feet in winter and in summer. Engineers, however, know the coefficients of expansion of steel rails as well as most other physical objects, and they allow for these expansions. Consequently, their measures of progress toward goals are much more accurate than educational measurements can be. It is much more difficult to estimate with accuracy the distance a child has moved toward a certain educational objective by having prepared a geography lesson than it is to know to what extent the bridge has been completed when one hundred rails have been laid.

It is not only difficult to estimate educational objectives because of our inability to measure educational progress, but also an additional difficulty is encountered because of the material with which we deal. When a steel rail is heated until the temperature is raised ten degrees, one can tell with a high degree of accuracy the change that will be made in the length of the rail; but when a child is scolded, or has been taught a poem, or has read a book, one cannot be nearly so sure of what the result will be. In one case we deal with a substance whose change is highly predictable and in the other with a substance whose change is highly unpredictable. Therefore, when one undertakes to set up ultimate objectives in education, and then more immediate objectives with the necessary activities for reaching them, he has a far more difficult proposition than does one who deals with inanimate objects. Nevertheless, educational objectives are necessary if one would make progress. Moreover, one who studies the history of education is impressed with the fact that at all stages of education there have been rather definite goals at which the various peoples of the world have arrived.

Educational objectives are necessary in order to know which of life's activities to select. The need for educational objectives increases as the amount of accumulated racial experiences increases. When the amount of knowledge to be learned was simple, even if one's objectives were vague he could not go far astray. But as the amount of knowledge increases, the probability of one's getting lost if he has no guide-line also increases. The accumulated racial experiences have so piled up today and the changes of society are so rapid that definite, clear-cut objectives must be kept in mind. Otherwise the dangers of not getting there are about as great as Lindbergh's chances would have been had he attempted to fly across the Atlantic Ocean without any instruments with which he could tell directions. Probably one should say then that the need for definite education objectives is greater today than ever before. They serve as guides in helping us to isolate from the

great mass of educational experiences those that are most needed for reaching the goals. One has a short life in which to live and do his work. He cannot go on the theory that he will live long enough to carry out the following assumption:

Could a man be secure
That his days would endure
As of old, for a thousand long years,
What things might he know!
What deeds might he do!
And all without hurry or care.

Educational objectives aid in motivation. Another reason for clear-cut, definite objectives in education today is that they tend to develop purposes and inner urges so that more intense activity will be put forth and a greater will to do will be manifested. It is deadening to engage in an activity in which one has no purpose or no objective to be reached. Human nature is built upon wants and desires. To engage in an activity that does not tend to satisfy these wants or that does not tend to reach any goals is almost certain to produce a lethargic activity, if any activity at all. Wholehearted, purposeful activity is produced when an individual feels himself getting closer to the thing desired. Sometimes a goal may be in the activity itself as in play, but it nevertheless satisfies the want at that time.

Summed up, then, the values of definite, clear-cut objectives in education would appear to be as follows:

1. They serve as guides for directing activity and guiding movements. They tell when to go to the right and when to go to the left.

2. They help us to select from all of life's activities those that tend to push one nearer the objectives. If one wishes to build a steel bridge, he pushes wooden timbers aside, for they do not suit his purpose. From all the materials he might select, he selects only the kind needed. They will help us to organize our activities in a way that will make for greater efficiency. If our objective is speed we try to eliminate or modify every movement that tends to consume time. If it is accuracy we try to remove all distractions which might cause errors.

3. They stimulate more intensive activity and make one work with greater effort because, having selected the activities needed, the performance of each activity will give one the feeling of success as he moves nearer the desired goal. In other words, it makes one work with a *will to do*, and the *will to do* is a vital factor in our accomplishments. It is often the factor that distinguishes the efficient individual from the inefficient one. For if one is to be efficient it is necessary for him to bend all of his energies toward the doing of worthwhile things and he will not do this unless he can feel that the activity satisfies some want or desire.

How Are Educational Objectives Determined? As one studies the history of education he is conscious of the fact that many different educational aims or objectives have been held. One may ask, then, what it is that determines what educational objectives shall be held up as goals in the educative process. For the answer we must look to the various philosophies of education that have been held at different periods.

The earliest education of which we have any definite information was possessed by Sparta, one of the states of ancient Greece. Since the nations which surrounded Sparta were hostile peoples, it was easy for Spartans to see that if they wished happiness and security in the future they must train for hardy and patriotic warriors. Consequently, their chief objective in education was a development of those traits that would make great fighters and great soldiers. Now a good soldier must be strong, courageous, obedient, and above all, he must believe in the state of which he is a part. Therefore the education which Spartan boys got was more like present-day army training. It was drill, exercise, and rigid discipline. Some historians tell us that between the years of eighteen and twenty a boy in Sparta was whipped every ten days in order to develop his courage.¹ He was fed the very coarsest of food. If a boy was born weakly so that it was evident he could never

¹ Graves, Frank P., *A Student's History of Education*, The Macmillan Company, 1915, page 13.

be a fighter he was cast off in the mountains to die of starvation and exposure. It should be noticed, though, that in this hard method of dealing with its children Sparta had a definite objective in mind. This objective was that type of development which they thought would make for the greatest happiness.

After the Persian Wars (492-479 B.C.) the Athenian held a different idea as to what would make for the greatest happiness. In short, he became critical of his past traditions. He believed in spreading Greek culture everywhere. He believed in much greater freedom of the individual than did the Spartan. The Greeks wanted their children to be cultured and able to debate. It was hoped that they would distinguish themselves politically. Therefore we find the Sophists training, not for fighters, but for speakers. In some instances they looked upon law as made by the few to restrain the many. Instead of teaching obedience to law like the Spartan they believed that obedience to law was a matter of personal interest. Their chief objective in life was happiness and this was best achieved, as they thought, through freedom of the individual. Hence the necessity of not being restrained by law.

A little later in educational history one finds Plato holding a different conception as to what constitutes happiness. He believed the soul developed through four cardinal virtues. The four cardinal virtues were Temperance, Courage, Wisdom, and Justice. Since these virtues were the key to the highest perfection of the soul, we may be sure that he would endeavor so to educate the state that these virtues would be realized. In *The Republic* he endeavors to show that the best way to reach these objectives is to have the intellectual group, the philosophers, rule. However, there can be little doubt that he really felt that such an arrangement would be the most efficient way to achieve happiness for all.

When one comes down to modern education he finds different countries differing materially in their educational objectives. For the most part the European countries build their educational schemes on the parallel type basis while in America it is built up

on the ladder-type plan. In general those countries which tend strongly toward centralized government are more likely to have the parallel plan and those with a more democratic government are more likely to have the ladder type. In Germany, for example, prior to the World War the school system consisted of the secondary school for the more aristocratic group, and the *volksschule* for the common people. Whether a boy attended one or the other depended almost completely on the lines of social distinction. American students of education who made a special study of the German educational school system were impressed with the small amount of initiative left the pupil in the *volksschule*. The pupils who entered this school were of the lower class. They entered at about the age of six and continued until about fourteen. If they continued their schooling after this they were likely to enter a vocational school since it was not expected that boys and girls from this school would become leaders. Since, then, the object was to make workers out of children who attended the *volksschule*, there was no desire on the part of educational authorities to develop initiative. It was believed by these nations that too much initiative on the part of the working group was not conducive to the greatest happiness. Boys and girls who were to become workers might get a desire to act as leaders if they were allowed to develop too much initiative. On the other hand, those in the secondary schools were allowed much more initiative, for they were to become the leaders and the thinkers who were to tell the others what to do.

In America, initiative is one of the characteristics which is desired in all. In a democracy all have an opportunity to act in the selection of their leaders and all who are capable have an opportunity to reach the point of leadership. America's philosophy of education, then, is that all shall have an equal educational opportunity and that the greatest happiness can accrue to all only when they are educated in so far as they have the ability.

Thus because our philosophies of what makes for the greatest happiness differ, so do our objectives in education differ. In one case the school systems develop docility through the

educative process and in another aggressiveness is the goal to be achieved. In either case, however, it is one's conception of what constitutes happiness, and what will bring the greatest good that determines what the ultimate goals of the educative process shall be. Sometimes the educational goals have been wrongly conceived and whole nations have inculcated ideals that could not help but lead to ruin, yet their people, who were responsible for shaping the objectives, doubtless thought that they were building for the greatest happiness.

The Major Educational Objectives. In the past, many different views have been held on what the major educational objectives should be. Comenius held that the objectives should be learning, virtue, and piety. Up to the time of Herbert Spencer, however, most of the objectives stated were of a very general nature and did not bear a close relation to the curriculum offered. Spencer, in his attempt to answer the question, "What knowledge is most worth?" suggests a classification of activities to be carried on, thus setting up the objectives to be reached. The activities which he would have carried on fell in the five following classifications:

1. Activities leading to self-preservation.
2. Activities having to do with the earning of a living.
3. Activities touching on the duties of parenthood.
4. Activities relating to citizenship.
5. Activities pertaining to the occupations of leisure.

His objectives become, then, (1) self-preservation (health), (2) the earning of a living (vocational efficiency), (3) parenthood, (4) better citizenship, (5) training for leisure time.

These major goals or objectives of education have served as the basis for many later classifications. In fact, most classifications of the major educational objectives since the time of Spencer seem to reflect his views more or less, except in the language used and in the greater number of divisions of the fields of activities. Below are given some of the lists of major educational objectives as presented by some of the best authorities in the field of curriculum making today.

Professor F. G. Bonser of Teachers College, Columbia University, mentions health, practical efficiency, citizenship and recreation as the major goals or objectives.¹ Professor C. C. Peters of Ohio Wesleyan University prefers a sixfold division for the activities to be taught.² They are cultural efficiency, socio-civic efficiency, vital (health) efficiency, domestic efficiency, vocational efficiency, and moral efficiency. Professor David Snedden of Teachers College, Columbia University, prefers a fourfold division of educational activities³—physical education, vocational education, social education, cultural education. Professor Snedden further divides his objectives into Alpha and Beta learning or projective and developmental objectives.

It is interesting to note how such a division corresponds to the objectives stated by the National Education Association on the reorganization of secondary education. In its "Cardinal Principles of Secondary Education" this commission proposes the following objectives:⁴

Health.

Command of the fundamental processes.

Worthy home membership.

Vocation.

Civic education.

Worthy use of leisure.

Ethical character.

The list has been the most widely used and quoted of any list yet proposed. It has sometimes been criticized for making one of the goals the command of the fundamental processes. Not that one should not have command of the fundamental processes, but that any goal that proposes merely the learning of so much subject matter is not to be desired. In other words, there is no more excuse for making command of the fundamental

¹ Bonser, F. G., *The Elementary School Curriculum*, The Macmillan Company, 1920, pages 13-14.

² Peters, C. C., *Foundations of Educational Sociology*, The Macmillan Company, 1924, pages 392-417.

³ Snedden, David, *Educational Application of Sociology*, The Century Company, 1924, page 73.

⁴ "Cardinal Principles of Secondary Education," *United States Bureau of Education Bulletin*, 1918, Number 35, pages 11-14.

processes the goal, than there is for making a command of certain facts in history or geography the goal. The danger in making so much subject matter an objective is that such subject matter may be learned irrespective of its functioning in life.

Other lists of major educational objectives could be mentioned, but an actual count would show that when all lists are checked the following objectives are most often mentioned: (1) vocational preparation, (2) citizenship, (3) health, (4) worthy use of leisure time, (5) command of fundamental processes, (6) worthy home membership, (7) ethical character.

The More Immediate Objectives. It has been indicated that the major educational objectives as stated today are quite similar to Herbert Spencer's. This should not be taken as an indication, however, that no progress has been made in the study of educational objectives. Great advancement has been made both in the technique of determining objectives and in the analysis of the major goals into smaller and more immediate objectives.

All the ultimate educational objectives in the past have been stated so broadly and in such general terms that they did not serve the purpose of very definite guides for the teaching profession. It is well to know that health is one of the ultimate goals of the educational process, but it must be divided and subdivided until its specific objectives are analyzed so that they can become a working basis. To develop health one must know the specific things one must do in order to have good health. One must know that bathing, cleaning the teeth, ventilating the bedroom, the needed number of hours of sleep, kind and amount of exercise, kind and amount of food, and many other things are necessary in order to preserve health properly. To teach the ideals of a good citizen one must know what they are. The big goal of citizenship must be broken up into its components. With this in mind many writers have attempted to state the ultimate goals with their many subdivisions. Probably Dr. Bobbitt, in his *How to Make a Curriculum*, has

done the best work of this kind thus far published. In this publication he divides each of his ultimate objectives into many smaller divisions. For example, the maintenance of physical efficiency is thought of as so many abilities. The ability to utilize muscular exercise, the ability to engage in setting up exercises, the ability to maintain correct postures, the ability to take proper precautions against the spread of diseases, and abilities to care for teeth, eyes, skin, and feet might all be thought of as smaller and more immediate objectives in reaching the ultimate goal, good health.

The same division and analysis has been applied to even smaller divisions. Undoubtedly the ability to read is essential to good citizenship, but this ability in itself is too general to be of much use to the teacher. What skills and abilities must one possess to become a good reader? A tentative list is suggested here. If one would be a good silent reader he must:

1. Learn to get meaning from the printed page.
2. Develop the ability for word recognition.
3. Possess a wide perception span.
4. Have a depth of comprehension.
5. Know how to outline, summarize, and select the important parts.
6. Know how to read to entertain himself.

One might go on and mention a great many other abilities necessary for reading, and then think of each one of these abilities as a specific objective in reading.

A similar attempt to break up the specific school subjects into still smaller objectives is occurring in other fields. The objectives of art instruction have been listed in the Missouri State Course of Study¹ in substance as follows:

1. To develop the child's capacity to enjoy his surroundings by making him conscious of their beauty, in the productions of great artists and craftsmen.

2. To increase judgment and taste in regard to what consti-

¹ Good, Carter V., "The Objectives and Status of Art Education in Secondary Schools," *Journal of Educational Method*, February 1928, pages 209-213.

tutes beauty, and to arouse the desire to make his surroundings and possessions as beautiful as possible.

3. To have such experience in creative work and in selecting, arranging, and judging finished products that the pupil may—

- a. Have the pleasures which come from even the simplest experience of this type.
- b. See the possibilities of art as a factor in many vocations, or as a vocation in itself.
- c. Develop an interest in art processes and in the lives of art workers as well as in finished products of art.

Many of these objectives are entirely too general, but they give us a better working basis than the large objectives of teaching esthetics.

Dr. S. R. Powers has listed the objectives of high school chemistry in such a way as to indicate the need for smaller and more definite objectives and to give a working basis for the high school teacher. He would have the following objectives of high school chemistry kept in mind:¹

1. To give to pupils a broad and genuine appreciation of what the development of chemistry means in modern social, industrial and national life.

2. To satisfy the natural interests in the things and forces of nature with which men are surrounded and with which they must deal; to give information which is interesting, purely for its own sake.

3. To provide opportunity for the student to become acquainted with the applications of chemistry to industry for the purpose of educational and vocational guidance and possibly to furnish a beginning of vocational training.

4. To develop such broad concepts and natural laws as the ultimate composition and indestructibility of matter, nature of chemical composition, and interrelation of chemical elements, to the end that science and reality may function in place of superstition and uncertainty in explaining natural phenomena.

5. To contribute such specific ideals, habits, and concepts as those of accuracy, achievement, persistency, open-mindedness, honesty, cause and effect, which are essential to the study of science.

6. To develop system, order, neatness, and possibly other at-

¹ Powers, S. R., "Objectives of High School Chemistry," *School Science and Mathematics*, November 1925, pages 832-833.

tributes to the end that they will function in the ordinary affairs of life.

7. To afford in some measure an opportunity to show the importance of scientific research and to stimulate the spirit of investigation and invention on the part of the student.

8. To give children full opportunity to indulge in the playful manipulation of chemical material in order that they may explore the world of reality as widely and as deeply as possible.

9. To provide opportunity for acquaintance with such applications of chemistry as contribute to the maintenance of the health of the individual and the community.

10. To provide opportunity for acquaintance with such applications of chemistry in public utilities in order that the student may more adequately fulfill the duties of citizenship.

11. To provide opportunity for acquaintance with the elementary laws of nature which aid in understanding those citizenship problems which arise in connection with such topics as utilization of waste products, elimination of smoke, and pure foods.

12. To make pupils able to read more intelligently and with greater interest articles on chemistry in magazines and in scientific books of a popular character.

13. To give such training as will result in increasing respect for the work of recognized experts.

Much has been written on the objectives of the social studies. The objective, development of good citizenship, is entirely too broad to have much meaning. We must know what a good citizen ought to do, and incidentally know what specific contributions a particular course in the social studies will make to the ideals of good citizenship. In other words, one ought to know rather accurately what the objectives are for any special course in the social studies. Recently a working list of objectives for a social science course in the twelfth grade has been prepared by F. C. Borgeson.¹ He believes a social science course in the twelfth grade should:

1. Give pupils a reasonable knowledge of present-day social, economic and political principles.
2. Secure a right social attitude.
3. Stimulate independent thinking.

¹ Borgeson, F. C., "Social Science in the Last Year of Secondary Education," *Peabody Journal of Education*, January 1926, pages 205-213.

4. Make citizens who will obey the law and help enforce it.
5. So stimulate each student that he will develop such abilities, inclinations, and ideals as will qualify him to take an intelligent and effective part in evolving society.

Among the many specific goals under these general objectives are knowledge of:

- a. The causes determining standards of living.
- b. The actual cost of living.
- c. The development and desirability of the family.
- d. The law of diminishing returns.
- e. Development and results of the industrial system.
- f. Importance, causes, and control of public-service corporations.
- g. Conditions leading to financial success or failure.
- h. Relations between individuals and the government—election-day duty.
- i. The dignity of the commonplace; the rights of the ordinary citizen.
- j. The proper relations between the individual and the community.

In citizenship teaching one can also find evidences of breaking larger major goals into smaller and more immediate goals. Rating scales on citizenship include such items as coöperation, health, industry, reliability, courtesy, efficiency, and moral strength. These are again subdivided. Coöperation, for example, may include the following: sociableness, willingness to do our share, openmindedness, seeking to serve and being positively helpful. Industry is broken up into such traits as promptness, steadiness, persistence, interests, and ideals of industry. Many of these terms must, of course, be broken into still smaller objectives before they can be used to maximum advantage.

It can readily be seen that while little change seems to have been made in the statement of ultimate goals, much work has been done toward refining them and toward breaking them up into smaller and smaller units. From the standpoint of the

teacher, the ideal would seem to be the division and subdivision of each objective until there are definite objectives to be gained in each recitation,—these objectives to be so arranged that each objective gained will place one that much nearer the ultimate goal. Such an array of immediate objectives, consciously sought, would not only serve as an incentive to high grade teaching, but would also serve as a measure of daily accomplishments.

QUESTIONS AND EXERCISES

1. Should the objectives in education be based upon the needs of adults or the interests of children? Justify your answer.
2. To what extent will the needs of adults today be the same as the needs of adults twenty-five years from today?
3. Why are educational objectives necessary? Is it true that it is more important to have educational objectives today than ever before? Why?
4. How would you undertake to determine what the educational objectives of a people should be?
5. Which list of objectives mentioned in this chapter do you like best? Why?
6. Show that the relative importance of Latin and biology depends upon the educational objectives.
7. Take the objective "Good Health" and break it up into at least twenty-five subobjectives. Is it more likely to be taught successfully in its latter form?
8. Should educational objectives be set up scientifically or philosophically? Justify your answer.
9. Show that the ideals of a people determine what its educational objectives will be.
10. Who is the best prepared to set up the educational objectives, the philosopher of education or the psychologist? Why?

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XXV

THE CURRICULUM

The Making of the Curriculum. There is probably no more important phase of education than the curriculum. Within the past decade the subject of the curriculum has received more attention than almost any other part of education. Tens of thousands of dollars have been spent by school systems to get their curricula revised and brought up to date so that they will reflect as accurately as possible modern educational points of view. This is evidence that the curriculum is not only considered important, but also that it is considered very important to keep it reflecting modern social conditions.

When one speaks of the curriculum he has in mind usually those experiences, activities, and ideals that one should pass through in arriving at the educational goals. There is, however, no unanimity of agreement on what the curriculum is. Sometimes the curriculum is spoken of as that entire range of experiences needed for developing the abilities of the individual. At other times the curriculum is referred to only as the directed experiences that are given for such development. In the first definition the curriculum is broader than the school subjects which we teach in school. In fact it is so broad that it would include all educational experiences, whether they were received in school or received from other institutions and experiences in life. The consensus of opinion of men in education today, however, seems to be to apply the term curriculum to the directed experiences, and especially to those directed experiences given by the school. Whichever definition one holds to, it will be readily seen that the curriculum is of vital importance.

It has been said, and probably truthfully, that what we teach

is of more importance than how we teach it. Good teaching is not only highly desirable but essential in a successful school. The demand is for qualified teachers, teachers well trained both scholastically and professionally; but if the curriculum,—what we teach, is of the wrong type the more effectively we teach it, the more harmful the teaching becomes. Of course, one might argue that the better qualified teachers are, the more likely they are to make their own curriculum, since they would tend to build it out of desirable experiences. It is highly probable that this would happen. It is said that if America had 700,000 teachers who could teach Hebrew like so many hairbreadth escapes, they would manufacture their own curriculum in such a way that the experiences the child has would be desirable; but as has been claimed, up to the present America more probably has had 700,000 teachers who taught hairbreadth escapes like so much Hebrew.¹ With such conditions there can be no doubt that the safest plan for American education is to put into the hands of our teachers a curriculum soundly built both sociologically and psychologically.

Because of the plastic mind of youth, the curriculum becomes a powerful agent in shaping the ideals and destiny of a nation. Almost always a curriculum reflects the philosophy of life of a people, and hence it can be to a very large extent the means by which thought can be molded. If one believes in a democratic education he can, by giving through the schools the right types of experiences, develop initiative, spontaneity, and ability to think. Not only can this be done, but it must be done in order to have a democracy based on a strong foundation. In a democracy it becomes the business of every individual to pronounce judgment upon its leaders and its governmental officials. Hence in a democracy people must be taught to think and to exert judgment. It is true, of course, that a democracy demands good followship as well as good leadership, but in a very real sense every individual in a democracy is a potential leader.

No one has realized to a fuller extent the value of the cur-

¹ *The Twenty-sixth Yearbook of the National Society for the Study of Education*, Public School Publishing Company, 1926, Part I, page 3.

riculum in molding the thought of a nation's people than did Napoleon. Napoleon set about building up a strong centralized school system through educating the children to believe firmly in the powerfulness of the state. They not only were taught through the curriculum that they must abide loyally by the laws of their government, but they were taught that they should pay due homage to their ruler, Napoleon. This may be seen from the following quotations from Napoleon's Catechism:¹

Question: What are the duties of Christians toward those who govern them, and what in particular are our duties toward Napoleon I, our emperor?

Answer: Christians owe to the persons who govern them, and we in particular owe to Napoleon the First, our emperor, love, respect, obedience, fidelity, military service, and the taxes levied for the preservation and defence of the empire and of his throne. We also owe him fervent prayers for his safety and for the spiritual and temporal prosperity of the state.

Question: Why are we subject to all these duties toward our emperor?

Answer: First, because God, who has created empires and distributed them according to His will has, by loading our emperor with gifts both in peace and in war, established him as our sovereign and made him the agent of His power and His image upon earth. To honor and serve our emperor is, therefore, to honor and serve God Himself. Secondly, because our Lord Jesus Christ Himself, both by His teaching and His example has taught us what we owe to our sovereign. Even at His very birth He obeyed the edict of Caesar Augustus; He paid the established tax and while He commanded us to render to God those things which belonged to God He also commanded us to render to Caesar those things which are Caesar's.

Question: What must we think of those who are wanting in their duties toward our emperor?

Answer: According to the Apostle Paul, they are resisting the order established by God Himself, and render themselves worthy of eternal damnation.

¹ Hayes' *Political and Social History of Modern Europe*, The Macmillan Company, New York, 1916, volume 1, page 535. (Requoted from W. H. Kilpatrick, *Source Book in the Philosophy of Education*, The Macmillan Company, New York, 1923, page 10.)

It is not difficult to understand how children who have absorbed this type of philosophy will in adulthood give unfaltering allegiance to their rulers. In the same way they can be easily taught that the nation which they represent, whether an autocracy or democracy, is superior to all other nations; and that a ruthless destruction of other nations may be purely justified on the grounds that it is legitimate for a superior nation to use any methods it chooses to establish itself better. Consequently it would seem that the curriculum, what we teach, is so vital that school systems could well afford to spend much money to make it reflect as accurately as possible the needs of childhood as well as adulthood. However, it has always been a difficult matter to make the curriculum do this thing. There is usually a rift between the school life and the life outside of school. While the curriculum ought to reflect life outside of school, it has in the past generally been divorced from it.

One reason for this is that the changes which occur in life and in the social order do not take place in the curriculum for a long while after they have occurred. Some have estimated that on an average this period is as much as ten or more years. This means, then, that at its very best, a school must teach a curriculum that is nearly a quarter of a century behind present social conditions.

Who Should Make the Curriculum? A study in the history of the curriculum indicates that in the past, three groups of people have been largely responsible for making the curriculum in our schools.

The subject-matter group. The first of these groups has been referred to as the subject-matter group. This group was strongly imbued with the idea that accomplishment in subject matter was the important thing. Also it believed that for the most part certain subjects were far more important than others on the grounds that they presented so many more hurdles to be jumped; and in jumping over these difficult hurdles, the child's mind would be trained in such a way that it would function in the different problems it would encounter in life. In other

words the subject-matter group was dominated by a belief in formal discipline and transfer of training.

In view of the fact that this group believed the mind could be trained by certain subjects, it is easy to understand how the curriculum under its direction was loaded heavily with those subjects that they considered especially valuable in developing the trained mind. Such subjects included the classics and mathematics. This group was not seriously concerned about whether children were interested in the subjects which they had to take. In fact, it was commonly believed that the more they disliked the subject, the better the training. This led to the philosophy on the part of some that it made no difference what a child studied so long as he did not like it.

Any revision of the curriculum while in the hands of the subject-matter group was almost always made from the standpoint of greater facility in administration. The history of the curriculum during this period shows that scarcely ever was a national committee for revising the curriculum appointed which was not strongly dominated by men engaged in administration either in colleges and universities or in the public schools. Naturally, such changes as were made, were made in the interest of administration rather than in the interests of the children.

It would be well to keep in mind also that the subject-matter group not only believed in transfer of training, but also believed that certain subjects were peculiarly fitted to develop such transfer effectively. There seemed little doubt in the minds of this group, that a man who had been carefully trained in Latin, Greek, and mathematics ought to make a good superintendent of schools, the theory being, of course, that the mental discipline and development that he had received from the study of these subjects would build up a trained mind that could operate in almost any field. Naturally there was not much demand on the part of this group for a curriculum based upon the principle of utility. No study was made of the needs of life in order to find to what extent the curriculum which was offered, better fitted the children for life. That the curriculum

was impractical at this time may be seen by noting the content of some of the older textbooks.

In Walsh's old *Mercantile Arithmetic* this problem appears: "What length of cord will fit to tie to a cow's tail, the other end fixed in the ground, to let her have liberty of eating an acre of grass, and no more, supposing the cow and tail to be five yards and a half?"¹

Such a problem may be interesting in the same sense that a puzzle is interesting, but it is very doubtful if it could be considered practical from any standpoint. The following problem from the *Franklin Arithmetic*, written in 1832, also shows a lack of utility value. "A human body, if baked until all moisture is evaporated, is reduced in weight as 1 to 10. A body that weighs 100 pounds living will weigh how much when dry?"²

In Barnard's *Arithmetic*, written in 1830, one will find problems whose moral value might well be questioned. Students who understand the power of the psychology of suggestion will readily see that the following problems might easily lead to immoral conduct:

1. John made three marks on one leaf of his book and six on another. How many marks did he make?
2. For this act, the teacher gave him five blows on one hand and four blows on the other. How many blows did she strike?
3. Then, seven boys laughed at him on one side of the room and two laughed on the other. How many boys laughed?³

Many more problems from older textbooks might be cited to show that the old curriculum under the subject-matter group was not intended to reflect the principle of utility.

The child-study group. The second group to be responsible for the type of curriculum used has been designated as the child-study group. This group put strong stress on the child as the center. With it the environment was to be so shaped that the best interests of the child would be drawn out. With

¹ Johnson, Clifton, *Old Time Schools and School Books*, The Macmillan Company, 1904, page 309.

² *Ibid.*, page 314.

³ *Ibid.*, page 315.

this group, subject matter was the least consideration. Unfortunately, the doctrine of child interests was carried to the extreme by some advocates. Some of the proponents of the child-study group went to such extremes as to advocate that no restraint whatever be put on the child's impulses. When the pupil came into the schoolroom in the morning he was expected to give vent to his wishes, on the theory that he ought to do anything toward which his interests directed him. This in its extreme form represented a type of soft pedagogy that did not reflect credit on the school. Fortunately this belief was not accepted by the most eminent supporters of the child-study group.

Among the most prominent proponents of this theory were such men as Dr. John Dewey and Dr. William H. Kilpatrick, Teachers College, Columbia University and Dr. Boyd H. Bode of Ohio State University. These men are believers in making the child the center in curriculum development, but they at no time have advocated an extreme point of view. They believe the curricular experiences should be so carefully graded and presented that the maximum interests of the child will be utilized. They would like to have the environment so shaped that children will want to do what they should, which is an entirely different doctrine from that of letting them do as they wish.

Subject matter with this group, when offered, would involve the principle of psychological arrangement as well as the principle of logical arrangement. Interests of the child, instead of being pushed aside, are to be utilized to their fullest, on the theory that much energy is wasted and wrong attitudes built by forcing children to study subjects and utilize experiences strongly disliked. Largely through the work of Dewey, Kilpatrick, and Bode, teachers today are stressing what Dr. Kilpatrick calls the wider problem of method; that is, they are striving hard to build the right attitudes, aspirations, and ideals, as well as to teach subject matter. They realize, in other words, that to get a child to love to study a subject is often more

important than the learning of any part of the subject; and conversely to build up an attitude of dislike toward a subject is probably more detrimental than the failure to master any of its parts.

The doctrine of the child-study group can be characterized by such expressions as psychological versus logical, expression versus suppression, child growth versus adult preparation, interest versus effort. In fact, John Dewey probably more than any other man has propounded the doctrine that there should be no conflict in interest and effort. The more a child is interested in a subject the more effort he ought to put forth, whereas the old theory advocated that the less interest the more effort, and the expending of this effort was the essence of the training derived. Incidentally, it might be understood here that effort is used in two senses. When one is not interested in the work to be done much effort will need to be spent, but the effort is spent in whipping one's thoughts in line and in forcing attention, not in accomplishment. When one is interested in work, much effort will probably also be spent, but it is utilized in accomplishments and not in overcoming distractions. The child-study group emphasizes the importance of education for the present and that by this means one will take care of the future. This is sound doctrine for if the present is always taken care of the future will be met. That is, adulthood is simply one point on the scale of growth and will be reached in due time if the ever-present now is properly recognized.

The scientific-study-of-education group. The third group to be largely responsible for shaping the curriculum is what has been designated as the scientific-study group. This group is anxious that the curriculum prepare the individual to meet our social complexities. They would make an analysis of the social conditions and problems that one will have to face, then by means of the curriculum prepare the individual to meet these problems. The scientific-study group, whose work dates from about 1910 or 1912, and whose influence is just beginning to be felt, is not opposed to the child-study doctrine.

In fact, the scientific study group puts great stress upon the importance of teaching the child to live now, and the importance of the environment in drawing out the proper responses. It would strongly stress, however, the conception of analyzing the environment, in order to understand more thoroughly what the desirable responses are.

Dr. Harold Rugg, of Teachers College, Columbia University, is one of the men who is responsible for the scientific-study-of-education point of view. Dr. Rugg appreciates fully the rift between our curriculum and social situations, and he is an ardent believer in a careful analysis of our social complexities as one of the essential bases for building a curriculum. It is undoubtedly true today that, under the guidance and direction of the child-study group and the scientific-study-of-education group, the curriculum is due to undergo much more rapid changes in the future than it has ever experienced in the past.

Who, then, should make the curriculum? It has just been shown that the curriculum has passed through the hands of three groups of people, the subject-matter group, the child-study group, and the scientific-study-of-education group. Under the subject-matter group the superintendent of schools more than any other man was responsible for making the curriculum. The method he used has been dubbed the cut-and-paste method. The plan was to get as many copies of courses of study as could be conveniently gathered together. A course of study would then be read until a sentence was found that pleased the superintendent. This sentence would be cut out and pasted in the new course of study. Eventually a course of study would be written, made up largely of quotations and sentences from already existing courses of study. It was a one-man proposition and reflected his ideas only to the extent that he could discover them in other educational manuals.

Today the curriculum is made, not by the superintendent of schools, but by various representatives from different groups. A typical illustration of the group method of modifying the

curriculum today would include the superintendent of schools, a specialist in curriculum problems, a representative of the Parent-Teacher's Association, a representative of the Research Department, a sociologist, a psychologist, and a philosopher of education. Before the ideas of this group would be definitely written into a course of study the suggestions they advance would be tried out in the schoolroom with the average teacher under normal conditions, to determine the extent to which they would work. Revisions would then be made accordingly, so that in the final analysis the course of study or the curriculum advocated would bear little resemblance to the cut-and-paste conception. In short, the curriculum today is to be made by a composite committee representing all points of view, including child interests and sociological problems. No one can hazard a guess as to the influence of such a method on child development.

Why the Curriculum Lags Behind Social Life. It has already been stated that there is usually a rift of several years between school life and social life. That is, the curriculum does not keep up with social changes. There are several reasons for this lagging behind on the part of the curriculum.

In the first place, there is a lapse of time between a social change and its incorporation in textbooks. By the time social changes can be written down and incorporated in textbooks so that they can be taught in our schools, several years may have elapsed. That this interval between the social change and its incorporation in our school curriculum can be lessened is the belief of men in education today. In fact, there is considerable evidence that much effort will be spent in the near future in trying to shorten this span. Incorporation of research findings into our school program is too slow a process under present conditions. It is almost as important that this period be shortened as it is to know what the social changes are, for social changes that are incorporated too slowly into the lives of pupils may be so out of date that they are without value. The more changing the civilization, the more likely this is to be true.

There are certain obstacles to curriculum revision. A second reason why the curriculum lags behind social changes may be referred to as obstacles to curricular revision. A number of factors coming under this head have been discussed by Dr. George S. Counts.¹ Dr. Counts sent a questionnaire to a number of high schools in the country, asking among other things what the chief obstacles to curriculum revision are. His findings indicate the following:

1. First of all the cost of curriculum content or method was the chief factor. There can be no doubt but that cost figures very prominently in curriculum revision. It is an enormous task to modify the curriculum in much detail. It involves the services of many local teachers and helpers; and in addition, may necessitate bringing to the school system some authority in curriculum making. It is not unusual for a large city school system to spend \$10,000 or more on the revision of its curriculum.

2. The training and present abilities of the teaching force is a great hindrance to curriculum revision. In revising the curriculum of a school system, the teachers themselves ought to be well qualified and should have had some special training in curriculum courses. In the past the professional requirements for teachers have not usually included work on the curriculum. The more the nation realizes, however, that curricular revision is one of the important functions of the school, the more probably will future requirements for teachers include some training in the technique of curriculum making.

3. A third obstacle in retarding curricular revision is the character of the existing building or equipment. In many instances a revision of the curriculum will include teaching by the project method and sometimes a change in departmental teaching. In addition, special types of work for meeting individual differences will often be undertaken. With such changes it is not difficult to see that school buildings and equipment that appear adequate with the old type of curriculum are entirely inadequate when the curriculum has been properly revised.

4. A fourth factor mentioned in Dr. Counts' findings among school superintendents shows existing textbooks to be a hindrance to curricular changes. Many states have state-adopted textbook laws whereby textbooks must be used for a period of five years or more

¹ Counts, George S., *The Twenty-sixth Yearbook of the National Society for the Study of Education*, 1927, Part I, Chapter VII, page 155.

before they can be changed. At the end of this period, it is usually possible to readopt the old textbook, and since this is likely to be a cheaper book than the new ones there is an incentive to readopt the same text as many as two or three times. This may result in the use of a book that is several years out-of-date.

5. A fifth hindrance to curriculum revision is the limitation in our knowledge of the curriculum. As early as 1870 it was recognized that something was radically wrong with the curriculum but the changes for the most part have been very gradual. Real thought and work on the curriculum are of recent occurrence. It is probably safe to say that more work on the curriculum has been done in the past ten years than in any preceding twenty-five. Even now our knowledge is so limited that when it comes to curriculum revision our schools are still attempting to find themselves. Certain tendencies today point quite clearly toward future curricular trends, but because of the state of flux which this field is in today, one could hardly hazard a guess as to changes that may be made in these trends.

The above mentioned objections are the most potent in retarding curriculum revision. There are many others, however, that are more or less influential in this respect. The public is usually conservative when it comes to curriculum changes. Too many people are inclined to believe that the good old days were better than the new, and that, therefore, any change made in the curriculum is likely to be for the worse. Many school boards and school superintendents are also conservative when approached on curriculum revision. It is human nature to want to move in the path of least disturbance and one that requires little adjustment. The history of curriculum making in the United States shows that administrators are often opposed to any extensive or fundamental revision because of the possibilities of breaking into administrative arrangements.

Another cause of curricular retardation is the influence of certain book companies which try to retain their adopted books and to keep them from being replaced by newer ones. This has often been claimed a potent influence in retarding curriculum revision. Dr. Counts' study, however, shows that it is an extremely minor influence. Counts' study in this respect is

probably more nearly correct than the snap judgment of the public. Most book companies are anxious to see progressive school systems; and in the majority of instances they have new and modern books which could just as well replace the old ones. It will be noted from what has been said that most of the drawbacks to curriculum revision mentioned above are not such that they cannot be remedied. For this reason one may expect that in the future curriculum revision will be a common trait of progressive school systems.

The Place of the School in Curriculum Making. Since the making of the curriculum is such an important task, it is appropriate to ask what place the school should occupy in curriculum construction. The school as such offers a formal type of education and has certain objectives in mind which it consciously attempts to attain. It is, however, very difficult for the school to do its specific work without taking into consideration the experiences which are offered by other institutions than the school. In other words, the school itself ought to be looked upon as a residual educational agency. The task which the school sets for itself depends to a very large extent upon what other institutions are doing. In other words, the school's business is a variable, not a constant. Its work will not only vary as social life varies but also will vary according to the extent to which other institutions do their share in the educational world. As the home becomes less efficient the school must become more efficient. As the church fails to do its work, the school must compensate by doing a still greater work, and so it is with all other institutions that educate. Hence, in attempting to answer the question, what should the school do in curriculum making, one is compelled to say that the school must take into consideration the educational experiences offered by other institutions. With this in mind it would seem that the school has seven tasks to perform relative to the curriculum.

First of all, it should set up as accurately as possible the experiences, ideals, and attitudes which individuals should have in order to enjoy a full, rounded education. This cannot

at present be done with very great accuracy. There is too much question about what experiences, ideals, and attitudes are essential for the educated life. They will vary with social conditions. There is no unanimity of opinion as to the number of experiences and ideals, or which ones are most vital. The teaching profession, however, can approximate the number of activities that should be taught, and the kind of ideals and attitudes that should be instilled. Even though such a list cannot be proved to be *the* list it can serve as a beginning and with modifications from time to time could be made the basis for curriculum progress.

In the second place, the school should make a survey of the experiences, attitudes, and ideals gained from other institutions. In this list it will be found that the other institutions than the school offer some experiences, attitudes, and ideals that occur in the list the school has decided on as necessary for the educated life. These are to be subtracted from the list which has been set up in order to know those experiences, attitudes, and ideals for which the school shall be definitely responsible. In the list of activities offered by other institutions than the school there will be found some that the school could not approve and which do not appear in its list which is necessary for the educated life. It will be the business of the school to correct these wrong experiences or stamp them out of the child's life as nearly as possible.

The third function of the school, then, in relation to curriculum making, is actually to offer the experiences and inculcate the attitudes and ideals which appear in the desirable list but are not offered outside of the school.

In the fourth place, a school must serve as a corrective agency and in this capacity it will attempt to correct or stamp out all undesirable experiences which have been received from other agencies than the school.

In the fifth place, the school must act as a coördinating, integrating agency. When experiences, attitudes, and ideals are received from agencies other than the school, while others

are received from the school, there must be some central authority to coördinate and consolidate all these desirable experiences into a working whole. Since the school is a conscious educational agency and is highly subject to control, it would seem to be the best fitted of all educational institutions for performing this integrating, coördinating function.

In the sixth place, the school more than any other educational agency should discover the best methods for developing the most desirable experiences, ideals, and attitudes which the school itself is offering, and it should also work with other institutions in attempting to find the best methods for offering those activities for which other institutions are responsible.

Finally, the school must more than any other agency develop in its individuals the capacity for adjustment. Even when the school has done the best it can in attempting to teach activities and inculcating attitudes and ideals which are most desirable in an educated life, there will still be many experiences needed which no one could foresee. In other words, children who are educated in the schools today are really living their adult life twenty-five years hence. Since no one is wise enough to see twenty-five years in the future and know what experiences men and women will need at that time, it becomes the task of the school to develop the capacity for adjustment so that our boys and girls who will become men and women twenty-five years hence will be able to meet the new situations and adjust themselves to them. The seventh function of the school, then, transcends all of its other functions. The extent to which the school succeeds in accomplishing the first six purposes named herein will determine in large measure the extent to which it can accomplish the seventh purpose, namely, a development of the capacity for adjustment.

In the light of the preceding discussion it would appear evident that the school is not an educational agency that can do its work independently of the other institutions. Instead, the school must join hands with the church, the home, the state,

the industries, the press, and all other agencies that tend to educate, for only by this means will the school be able to know its own job and be able to add to the contribution of other institutions in performing it.

For questions and exercises, and for Bibliography on this Chapter see close of Chapter XXVI.

ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XXVI

THE CURRICULUM (*Continued*)

In the previous chapter an attempt was made to show the importance of the curriculum, who should make the curriculum, why the curriculum lags behind social changes, and the place of the school in curriculum making. In this chapter the discussion of the curriculum will be continued and particular attention will be given to two of its phases,—modern tendencies in the revision of the curriculum, and principles of curriculum making.

Modern Tendencies in the Revision of the Curriculum.

There are some rather distinct tendencies in the revision of the curriculum today, but as has been said before, the changes are in such a state of flux that one cannot tell the extent to which they will be modified as the curriculum progresses. Four tendencies will be discussed here as follows:

A curricular content to fit social needs. One trend that seems quite certain and distinct today and which gives promise of continuing for some time is the tendency to make curriculum content fit social demands. This tendency has been instrumental in bringing about extensive modifications in most of our elementary school subjects, as will be noted below:

1. **SPELLING.** For a long time spelling has been taught in the public schools, and for many years there has been evidence for the belief that the teachers of spelling had no definite conception as to why spelling should be taught. Later investigations and studies in this subject have pointed out definitely that the only purpose of teaching spelling is in order that children may learn to write. Children cannot write until they can spell. This raises the question as to what words children should spell.

A survey of the old spelling books indicates that many words included in the spellers and taught the children are seldom, sometimes never, used in writing, and certainly children never used many of them in writing. Scientific investigations today have shown that between 4,000 and 5,000 words are as many as children normally use in their writing by the time they have finished the elementary school. On the other hand, many of the old spellers had more than 10,000 words in them, and a history of our earlier education would show a tendency on the part of the teachers to see that the children spelled all of these 10,000 words. This meant that usually the child had to learn approximately 5,000 words which he would not use in his writing. Since these 5,000 were more likely to be the difficult words, they usually required so much time that the 5,000 words which do appear in writing were not definitely learned. It should not be understood here that an individual uses only 5,000 words in his writing. The inference is that this is as many words as he will use in his writing by the time he has finished the elementary school. It is the purpose of the best teachers of spelling today to teach well these 5,000, and by so doing, develop in the child a spelling conscience so that he will have a strong desire in his future writing to look up the spelling of any word which he does not know. The psychology of learning to spell a word when needed indicates that this is the best time to learn to spell a word. When one needs to use a word in his writing and looks up the spelling of it at that time, he is usually imbued with a strong purpose to spell, and this brings greater satisfaction. In other words, learning to spell a word when the neurones are ready to act not only brings greater satisfaction but likewise fixes more strongly the correct impression of the word.

In addition to developing a spelling conscience the best teachers of spelling are also anxious to develop a spelling consciousness—a consciousness of the correct spelling form of a word when it is seen. The older teachers of spelling made no attempt to get children to visualize the word. This is one of

the prime causes of inability to spell. If the word "motor" is pronounced it is just as essential that the child see the end of the word as the beginning, then he will not be at a loss to know whether the ending is e-r or o-r. Anyone who visualizes a schoolroom today where the best teachers of spelling are at work will note that the visualization of the word is stressed. Since the purpose of spelling, then, is in order to write, one should be sure in spelling a word that he can spell it in writing.

The older method of teaching spelling was to isolate words from their context. The newer method is to teach the spelling of the word in its context. It is generally believed today that there is no assurance that a child can spell a word until he has spelled the word while using it in his writing. Since spelling is for no other purpose than to aid writing, there is no reason for spelling a word except while writing. It is interesting to know also that research findings in spelling have indicated that learning the meaning of a word does not aid in its spelling except in the case of two words pronounced alike but spelled differently. This does not mean that the meaning of a word should not be learned while spelling it. Since spelling is only for the purpose of writing it would, of course, be a waste of time to learn to spell a word whose meaning was not known, for in such a case the word could not be used in writing. In relation to the actual spelling of a word, however, learning the meaning does not seem to be of material aid.

From the above it will be seen, then, that the attempt to teach spelling in accordance with social usage not only reduces materially the number of words taught, but it has vitally influenced the methods of teaching. In fact, it is safe to say that it has changed our whole objective in teaching spelling. The objectives of spelling today not only include teaching the words to be spelled, but also a spelling consciousness and a spelling conscience. From this newer conception of the purposes of spelling a number of excellent principles for its teaching have developed. Among these the following are some of the most important:

- a. Oral spelling should seldom be used. Written spelling, with the words in context, should almost always be used.
- b. The first impression of the spelling of a word is vitally important, hence one should put strong stress on the visualization of words before attempting to spell them.
- c. Every word spelled should be visualized carefully so that its ending as well as its beginning stands out in distinct relief.
- d. Children should scarcely ever grade each other's spelling, for this often terminates in impressing many words wrongly.
- e. Every word to be spelled should be attacked directly. But few rules for spelling should be emphasized.
- f. The meaning of a word should always be learned in spelling; however, the meaning does not aid in spelling the word.
- g. It is an aid in learning to spell words to group them phonetically.

2. READING. Reading has undergone great modifications in its attempt to keep up with social changes. There is much greater demand today for reading than ever before. It has been estimated that the number of newspapers and magazines issued since 1880 has increased at least 500 per cent, while the population during the same period has just about doubled. It has also been estimated that the daily circulation of newspapers is over thirty millions. A number of periodicals have a circulation of more than a million, and the number of library withdrawals is increasing almost fifty per cent a year. This, together with rapid transit and daily mail delivery in the most rural parts of our country, has tended to increase vitally the amount of reading material available as well as a greater demand for more intelligent reading.

For this reason the teachers of reading today are facing a far more important problem than ever before. Their business is not only to teach children how to read, but to teach them to read and to enjoy it. This can be done, and it will be done as

the curriculum in reading is revised. Better methods will do much to stimulate a greater desire to read, but possibly the greatest need in this connection is a revision of the material to be read. There is considerable evidence for believing that the authors of modern textbooks in reading realize this and are striving hard to base the reading material on a psychological foundation. It is probably not too much to say that a normal fifth grade child should read 500 pages a week independent of his regular assignments; that is, that he should read 500 pages a week just because he wants to read. The best way to get him to do this is to base the reading material on those instances that make the greatest appeal. For example, in the old readers sentences such as the following may be found:

We must never forget that we do not live to eat but we eat to live. Turnips and beets grow in the ground. Both are good to eat.

One cannot readily imagine a child who would show much enthusiasm for this kind of material. There is no appeal to the instincts of adventure and no curiosity aroused to be satisfied. With such material it is extremely difficult to teach children how to read, and it is well-nigh impossible to teach them to want to read. In contrast to this type of material our new readers will be based more and more along the lines of the following:

Once upon a time a great many animals lived in a forest. There was one animal in the group that was bigger than all the rest. His name was King Tawny-Mane. He often satisfied his hunger by literally eating some of the other smaller animals. All the animals except King Tawny-Mane were very much frightened, and so excited that often they could not sleep at night. Finally these little animals went to King Tawny-Mane and said, "King Tawny-Mane, we have come to make a proposition to you. We propose that if you will leave us alone we will meet each day and draw lots, and on whomever the lot falls, that animal will voluntarily give himself up to be eaten if you will let the rest of us alone at night and let us sleep in peace; then the next day we will draw lots and send you another animal to be eaten."

King Tawny-Mane said, "All right, that is satisfactory."

The next day the animals had a meeting and drew lots to see what animal should go and give himself up to King Tawny-Mane to be eaten, and at this very first meeting the lot fell upon a little rabbit named Cottontail, so he had to make a trip to the king. Little Cottontail was in no hurry to go. He dreaded to go to this big old king to be eaten so he played along the road and played along the road until when he got there it was over an hour past King Tawny-Mane's dinner time. When the little rabbit came up King Tawny-Mane was so hungry he was just stamping the ground.

"Why are you so late?" asked King Tawny-Mane, "Don't you know even the elephant would not keep me waiting?"

The little rabbit bowed low and said, "Yes, I know I am late, but if you had seen what I have seen you would be late, too."

"What have you seen?" said King Tawny-Mane.¹

Now, the average reader in reading this story would be anxious to know what happened to the little rabbit, and so will the children. At the completion of this story in the reader, let the teacher hold up a three or four or five hundred page book and say to the class, "Here is a book that tells you all about what happened to little Cottontail. Anybody that wants to take this book home with him tonight and read it may do so." It is safe to predict that not only will there be great demand for the book, but that it will be read whether it has three or four or five hundred pages in it. This is what is meant when the statement is made that there is an effort to base reading material today on a psychological basis.

This greater demand for reading material today, in order to meet the social demand, has led to a modification of reading objectives. Who among the older readers cannot recall that a bit of advice commonly given to the pupil was to read slowly and deliberately, and also to read over and over again until the impression stuck? Today reading advice runs almost counter to this. Great effort today is being put on increasing reading rate, and norms and standards for reading rates have been set for the eighth grade, for example, that far surpass

¹ Adapted from Thorndike, *Principles of Teaching*, A. G. Seiler, New York, 1906.

the reading abilities of the average adult. This standard is necessary in order that children may read rapidly enough to cope with the great number of books, magazines, and periodicals that are daily pouring from the press. Speed of reading is also being increased because it has been discovered that there is a significant correlation between rate and comprehension.

3. ARITHMETIC. There is probably no subject in the elementary curriculum that has gone through greater changes in its attempt to reflect social changes than has arithmetic. The old conception of arithmetic was to have an abundance of problems of the puzzle type and of an impractical nature, hoping that in one way or another a reasoning concept would be developed. Today there is a definite attempt to make arithmetic reflect present social conditions. This has resulted in the elimination from some of the textbooks of many items such as greatest common divisor, complex fractions, true discount, partial payments, Troy weight, mensuration, and cube root. These subjects are being replaced by life situations such as a miniature grocery store, the organization of stock companies, the making of the family budget, life insurance, and the study of sound investments. There is good reason today for giving more attention to these things. Large numbers of individuals today are investors and probably owners of shares of stock or bonds in some type of business corporation. These subjects should be stressed in the arithmetics so that children will know the differences in preferred and common stock, the meaning of cumulative stocks, the relative safety of bonds and stocks. Likewise, they should know the effect of inflation and deflation on long-term bonds. They ought to know something of the history of building and loan companies and the purposes of such companies. They ought to be impressed strongly with the importance of life insurance and property insurance, together with the best kinds to buy. Such problems are practical problems and represent demands that will be made on the average individual when he takes his place in the adult social group.

The attempt to make arithmetic reflect social changes has modified materially our methods of teaching, and in many instances our objectives. For one thing this demand has focused the attention of authorities on the field of arithmetic. It has been the cause of many research investigations in which the errors of children in arithmetic have been analyzed. As a result one may know with a fair degree of accuracy the type of problems called for in social life. A survey of the social demands made on the adult individual in mathematics indicates that in addition, one-, two-, three-, or four-place examples with four addends is about as difficult an addition problem as social life will ordinarily demand. In subtraction, one-, two-, three-, and four-place numbers with the major emphasis on two- and three-place numbers will be sufficient to meet most social needs. In multiplication, a one- and two-place multiplier and a four-place multiplicand is about as difficult a problem as will be met. In division, a one- or two- or three-place divisor, with a six- or eight-place dividend, is sufficient. Social usage indicates that only the very simplest fractions are needed, and that decimals, outside of exchange in money, are scarcely ever used. The attempt to meet social demands in arithmetic has revised our methods. Recent publications in this field indicate, for example, that instead of forty-five combinations in addition to be learned, there are at least one hundred combinations, plus fifty or more higher decade combinations that ought to be learned.

A scientific book in arithmetic today not only indicates how many combinations in addition, in division, in multiplication, and in subtraction there are, but also has many suggestions on the manner of presenting them. Authorities in this field at present are trying to answer definitely the question of whether children should add up or down; whether in subtraction they should decrease the minuend when borrowing, or increase the subtrahend; whether the vocabulary of past textbooks in this field has been too difficult or too easy. They are also anxious to present problems in such a way that they will enlist the

interest and efforts of the children. In order to meet this test a number of books in arithmetic now include some entertainment problems. Older writers of textbooks were not particularly concerned about the practical side of their problems; for example, one could readily find such problems as the following:

How many silver dollars will just lie on the perimeter of a two-acre plot in the form of a square?

How long will it take a boat to go up and down stream, knowing how fast it will go down stream, and knowing the rate of the current?

While these problems may be of value in challenging the imagination, and serve as hurdles to be jumped, they do not reflect conditions in life and will probably never be used after they have once been solved. Cube root may serve the purpose of a mental hurdle, but not one reader in one hundred can recall three times in life where he has had occasion to work a problem in cube root.

4. PHYSIOLOGY. There is hardly such a subject today in the curriculum as physiology. It has rapidly been replaced by health and hygiene. Older books stressed such facts as the cranial nerves, the different parts of the brain, and the number and names of the bones in the body, with a short explanation of their articulatory processes. Today health and hygiene books stress health habits, how to care for the body, how to care for the mind, how to ventilate the bedroom, the proper types of exercise, the normal diet, and the proper functioning of the excretory organs. The old physiologies overstressed the dangers of alcoholic beverages, tobacco, tea, and coffee. The newer books do not approve of the use of these things, but they present them more nearly in their true light.

The feeling today seems to be that to the extent that anatomy is stressed in physiology its place is in the high school rather than in the elementary school, and even in the high school it should be stressed only with a limited number of pupils who, for one reason or another, are interested in this field.

5. HISTORY. History is also going through some rapid changes. The older texts dwelt upon the importance of battles and wars, of dates of happenings, and paid little attention to the industrial, social, and political happenings. The newer histories are almost completely reversing this process, since the major emphasis is now placed on the social and industrial life of a people.

6. CIVICS. Today in the teaching of civics, an attempt is being made to focus the attention of the pupil on the importance of his duties as a citizen, to inculcate the proper respect for property, the importance of cleanliness, and a right attitude toward his fellow men. The older conception of civics was that the pupil should get a full mastery of the state and national constitutions and should acquire a knowledge of the workings of different courts of the county, the state, and the nation. He had to relate in great detail the duties of all the local county officials and enumerate the functions of the judicial, legislative, and executive branches of his national government. Civics as taught in earlier years had little influence on good citizenship.

While only the subjects in the elementary school have been stressed here in showing the attempt to make the curriculum reflect social change, just as great changes have been taking place in the high school and college fields.

A tendency to a better grade placement of the materials. A second tendency that seems quite distinct in curriculum revision today is an attempt at a better grade placement of materials. It is just as essential that materials be properly placed in the grades as that right materials be discussed. For example, in spelling it is highly essential that the four or five thousand words needed in writing be known in order that they may be taught, but to teach them properly it is just as important that, after the five thousand words have been found, they be properly placed in the different grades. Of the various attempts to place the spelling words properly in the grades, the following have been most often used.

1. The placement according to the first appearance of the word in the child's writing. That is, whether or not the word "automobile" would be placed in the third grade for spelling or in the fourth grade will depend upon whether or not the word "automobile" first appears in the writing of the third or fourth grade child. This method of grade placement of spelling words has some strong arguments in its favor. Learning to spell a word when it is needed has all the advantages of strong purpose, mind-set, and pleasant attitudes. It has the disadvantage, however, in that sometimes a word used in writing for the first time is an unusually difficult word to spell and ordinarily would be placed much later.

2. A second method which has been employed in trying to place the words properly in the grades is placement on the basis of difficulty. By this method the words most easily spelled are placed in the lower grades, and the words most difficult to spell are placed in the upper grades. It goes without saying that this method encounters many difficulties.

3. Another method of grade placement of the words in spelling that has sometimes been used is one based solely on the length of the word. By this method the shorter words would appear in the lower grades and the longer words in the upper grades.

4. A fourth method in grade placement is one based on the most frequent occurrence of the word in the writing for the grade. Words placed according to this principle will likely be one or two grades above what they would be if they had been based on the principle of first appearance. These attempts to place the words in the spelling book where they should go according to grade are a recognition of the fact that a grade in which the material is learned may be as important as the material itself.

A recent attempt to place grade material properly has been made in literature. At Teachers College,¹ Columbia University,

¹ Huber, Miriam, "Children's Interest in Poetry," *Teachers College Record*, October 1926, pages 93-104.

an attempt was made to find the interests of children in literature. A list of 573 poems was taught in grades one to nine in a number of the most important school centers in the United States. Fifty thousand children and 1,500 teachers took part in the experiment. After teaching the poems and getting an opinion on what poems the children liked best and least, the authors were of the opinion that some of the poems were so disliked that they should be rejected and not taught at all in the grades. The list is too long to reproduce here, but some of the rejected poems included *Alexander's Feast*, *Answer to a Child's Question*, *The Bivouac of the Dead*, *Down to Sleep*, *The Fatherland*, *God Give Us Men*, *How Sleep the Brave*, and *Psalm 103*. Among the poems scored high were included such poems as *The Raggedy Man*, *Kentucky Babe*, *Little Orphant Annie*, *Somebody's Mother*, *Out to Old Aunt Mary's*, and *In School Days*. In addition to this the authors from their findings were able to suggest certain grades in which certain poems made their greatest appeal. For example, in grade one *The Woodpecker*, *Only One Mother*, *I Like Little Pussy*, and others were in the greatest demand. In the second grade *The Raggedy Man*, *Kentucky Babe*, and *Our Flag* were among those receiving the highest score. The reader is referred to this article as representative of a high type of research in which poetry is suggested for grades according to its interest to children.

Still another attempt at grade placement can be found in grammar. Grammar as such is a logical study, and more and more is the belief accumulating that it should be pitched on the secondary level rather than the grade level. Just now there is undoubtedly a tendency toward eliminating it completely from the elementary grades and substituting instead a better use of English and language studies.

A tendency to add more subjects. A third rather marked tendency in curriculum making today is the addition of more subjects. This tendency to add subjects to the curriculum is far outstripping the tendency to drop subjects. Many of the subjects in the older curriculum were there because of the

paucity of subjects at that time. Since so little knowledge was available mathematics and Latin and the classics in general had to make up the core of the curriculum, but with the accumulation of more and more knowledge, more subjects have been added. There is a tendency to retain any subject that has made its way into the curriculum. Consequently many subjects are in the curriculum today, not because of social usage or their utilitarian value, or even their cultural value, but because of tradition. Human nature is slow to discard old ideas and old possessions. In the same way the school people and the public are slow to discard traditional subjects although they may have outlived their usefulness. This tendency to add subjects out of all proportion to the tendency to drop subjects may be noticed from a study made by S. A. Courtis and George Counts in the *Twenty-sixth Yearbook of the National Society for the Study of Education*, Part I, Chapters 6 and 7. In Dr. Courtis' study dealing with the elementary school subjects, a questionnaire survey of the leading school systems in the state showed a much greater tendency to add subjects than to drop subjects, with such subjects as physical education, civics, and general science mentioned most often as those added. In Dr. Counts' study dealing with the high schools in the same way, 341 answers indicated subjects added and 130 indicated subjects dropped. Of the subjects added most frequently he found social science leading, followed rather closely by commercial subjects and industrial arts. Modern languages were added twenty-two times but dropped thirty-seven times. Ancient languages were added one time and eleven times dropped, thus apparently showing a tendency to drop ancient and modern languages from the curriculum. It may be that the modern languages here are not truly represented, in view of the fact that this study was made not long after the close of the World War when there was strong feeling for a time against teaching German.

One probable reason for adding subjects to the curriculum so much more rapidly than dropping them is not only the fact that we have possession of much more knowledge, but also

that there is a tendency to divide existing knowledge into smaller compartments. The more knowledge is divided up into smaller parts and called subjects, the greater the tendency will be to add subjects to the curriculum. Just now, however, there seems to be a counter movement. In curriculum making today there seems to be an attempt to synthesize subjects. This will be noted in the sciences. There is considerable evidence that a number of the schools today are teaching general science instead of so many separate subjects. Others are teaching biology instead of botany and zoölogy. In the social studies, also, there is a trend in the direction of teaching this field as a whole rather than as a number of special subjects such as history, geography, civics, and problems of democracy. Mathematics, also, is subject to the tendency of synthesis. General mathematics in some places is replacing the special fields of mathematics such as arithmetic, algebra, and geometry. With this movement towards synthesis going on, it may eventually balance the tendency to add more subjects to the curriculum so that in time these two movements may correct each other.

Principles of Curriculum Making. Having discussed the importance of curriculum revision, who should make the curriculum, why the curriculum tends to lag behind social life, the place of the school in curriculum making, and modern tendencies in curriculum making, it would now seem appropriate to turn to a discussion of principles of curriculum making. Principles, when properly stated and rightly appreciated, should serve as a guide in directing activities. For this reason principles of curriculum making should be considered basic in any discussion of the curriculum. While principles of curriculum making have been stated by different authorities and the number advocated range all the way from a few to many, it will be the purpose in this discussion to present only five. These five, however, are more or less a summarized statement of other groups of principles that have been more minutely divided.

The curriculum should be all-inclusive. The first principle one

should keep in mind in curriculum making is that the curriculum should be all-inclusive. It should undertake to deal not only with the directed experiences, attitudes, and ideals, but also with the undirected ones. It should not stop with the experiences offered by the school only but it should have to do with experiences offered by all other educational institutions and, in fact, all of life's experiences. The more nearly the school reflects social life the more nearly will the curriculum approach directed experiences; but at no time can one ever hope that the school will offer all or even a large part of the needed experiences. The experiences acquired outside of school are so numerous, compared to those which the school can offer, that one of the major tasks in curriculum making is to recognize properly this great group of undirected experiences. Hence the first principle in the making of a curriculum is that it should be all-inclusive.

The principle of utility. The second principle in curriculum making is the principle of utility. It has been said that knowledge is power. This is true in a very vital sense, but the powerfulness of knowledge depends very largely on the extent to which knowledge is useful in performing life's activities. The old theory of knowledge for the sake of knowledge did not have a very strong foundation. Knowledge is, and sometimes should be, acquired for the sake of culture, but the individual who is cultured is more likely to perform wisely life's activities and in this way knowledge, even though secured for the sake of culture, is embodying the principle of utility. When the principle of utility is applied to the curriculum one soon discovers that the older curricula offered many experiences and activities and even developed attitudes and ideals which were not necessary or essential or an aid in performing the duties of life; hence this principle, if applied to certain subjects that have been offered in our schools, would terminate in a reduction in the amount of material in these subjects. Arithmetics would be materially reduced in size and fifty per cent of the words that were taught in spelling fifty years ago would be discarded.

In attempting to apply the principle of utility to curriculum making, it is necessary that life's activities be analyzed. Life's activities include those which adults would be expected to perform and also the activities in which children are engaged. Some authorities on the curriculum have written as though there was a disparity between child life and adult life. Some of them have apparently taught that education must prepare for adulthood and that it made little difference about childhood; but John Dewey more than any other man in the United States has succeeded in convincing leaders in education that if child life is properly taken care of and the ever-present now always met, the future which will soon be present will likewise have been met. It seems reasonable, therefore, to say that the principle of utility will demand an analysis of child activities as well as of adult activities. Only by this means can one hope to offer those activities that are most useful in a good life.

In analyzing activities of childhood and adulthood it is essential that the activities analyzed be a reflection of social life. There have been times in the history of civilization when the best authorities on education looked upon the development of the individual life as opposing social life. It is more and more being recognized, however, that deficiencies in social life mean deficiencies in individual life, and one of the best ways to develop the individual is to focus attention on social deficiencies and the analysis of social needs.

The principle of utility in curriculum making not only necessitates keeping in mind the analysis of adult and child activities and the recognition of social needs and deficiencies, but it also will demand a careful study of child interests. It might have been all right for Mr. Dooley to have claimed that it made no difference what a child studied so long as he did not like it, or for John Locke to have endeavored to show why it made no difference what one studied so long as it was hard, but it will not do to advocate such doctrines in the light of our present knowledge of psychology. Children learn activities, skills, and proper ideals and attitudes more quickly where they are interested

and where the purposes are most clearly seen. A rat, in learning a pathway through a maze, will learn to avoid blind alleys in much less time when it is rewarded for correct trials than when it is punished for unsuccessful attempts. Interest, then, is a vital factor not only in the ability to learn but in learning more quickly. The child that continues to study subjects and to have experiences in which he is not interested and in which there must be more or less forced attention will probably develop attitudes and ideals that are undesirable rather than those that are desirable. Therefore the principle of utility in curriculum making demands a careful consideration of the child's interest, not only because interests are essential for most effective learning but because they are also great determiners of the extent to which things once learned will function in later life.

The principle of differentiation. The third principle of curriculum making is the principle of differentiation. The curriculum must meet individual differences. The subject of individual differences has forced itself to the forefront so much recently that careful attention has already been given to this subject. It is now recognized that every child differs from every other child, and that the law that like begets like is not absolutely accurate. As a matter of fact, like never begets like even though it may appear to do so. When individuals come into the school-room with different ideals, different aspirations, different attitudes, and different backgrounds, the curriculum must also vary in order to meet these differences. As a result it is not unusual to find in most of the larger schools today a diversity of offerings above the elementary grades. This is as it should be. Children coming from different environments and with different social inheritances look upon life differently.

In any curriculum the child's local environment should be kept in mind. This does not mean that a curriculum which reflects exactly his local environment should be offered to an individual. Rather it means that in bringing home to him experiences, or inculcating attitudes and ideals, the teacher should call on his local experiences in order to utilize best the laws of teaching.

In this connection the question is sometimes raised, "To what extent should a teacher have had a similar local environment to that of the pupils which she is teaching?" To be more specific, is a teacher born and reared in a city as able to teach rural children as a teacher born and reared in the country? The difference in rearing is probably not so essential, provided the teacher keeps in mind that the local environment of the child is a strong factor in the control of certain experiences, and that it affords a helpful avenue of approach.

Since the principle of differentiation is so essential in curriculum making, the question is often raised as to the extent of uniformity throughout the state that should exist in curricular offerings. Without attempting to settle this question it may be said here that the tendency of the present time is toward state uniformity and less local initiative. One reason given for this is the recognition of the mobility of our population. A great percentage of our people today are moving from one locality to another. A survey in California showed that a large per cent of the children in the eighth grade had attended more than one school. In other words, there is a strong inference that a child will not complete the grades in the school where he starts. Therefore some curriculum authorities believe that in curriculum making the principle of differentiation should be recognized, but that the main outlines of the curriculum should be much the same throughout the state and that the local environment will enter into the carrying out of the details of the curriculum. The present tendency toward greater state uniformity in the major outlines is an attempt to plan the curriculum in such a way that individuals who move from one locality to another will not find so much difficulty in adjusting to the new school system.

The principle of integration. The fourth principle of curriculum making is that of integration. While the principle of differentiation undertakes to meet individual differences through variation in the curriculum, the principle of integration undertakes to supply in each curriculum enough experiences to give

all children some common ideals. Usually the elementary school is looked upon as that part of the school which should develop the ideal of integration. It is essential, however, that in the junior high school and senior high school this ideal of integration be continued. While offering many curricula in the high school, certain subjects are usually found common to all curricula. These subjects are often referred to as constants and are required of all pupils regardless of the curriculum in which they are enrolled. The remaining subjects offered in the high school in different curricula may be either what are usually known as free electives, electives which anyone in the school can take, or they may come under the heading of curriculum requirements which are subjects required for any pupils taking a particular type of curriculum, but are not required for pupils enrolled in other curricula. Finally, some subjects in the high school may be referred to as curricular electives. These are subjects that can be elected by pupils enrolled in a certain curriculum, but are not electives for pupils enrolled in other curricula.

Another way in which the principle of integration is being met in the curriculum is in the correlation of certain subjects. The more geography is taught as geography instead of being taught as a social science the more likely it is that it will not function in life when needed. Subject matter isolated from other subject matter when learned, will usually be found isolated when needed in life's activities. Knowledge should be thought of as a comprehensive whole. The tendency to think of it as divided into compartments, as is done so often in teaching, is not good psychology. To bring about better integration and insure a better functioning of knowledge, a number of subjects today are being correlated. For example, history, geography, civics, economics, and problems of democracy, are being offered as one subject called social science.

The principle of unit division. The fifth principle in curriculum making is the principle of unit division. By this is meant an attempt to divide that part of the curriculum offered in

schools into units. A unit has reference to a certain number of activities, attitudes, and ideals that can be presented in a given length of time. An activity is sometimes considered a thing to be done; and through the doing of certain activities, attitudes and ideals can be developed. A unit of teaching, then, simply means so many activities to be performed within a specified time. According to Harap,¹ a teaching unit should possess the following thirteen qualities:

1. It should reproduce life situations as far as possible.
2. It should involve work with actual materials.
3. It should utilize the actual materials as they occur in life as far as possible.
4. It should involve a variety of direct sense experiences.
5. It should not deviate aimlessly from the objective of the unit.
6. It should include a considerable amount of active student participation.
7. It should be adapted to the ability of the learning group.
8. It should contain accurate information.
9. The printed direction of the activity should be lucid and graphic.
10. It should contain a variety of activities, including discussing, constructing, comparing and the like.
11. The reference should be clipped, complete and exact.
12. The amount of activity required should not be greater than can be carried on in the time allotted for the unit.
13. The development of the activity should be in the order of a child's behavior.

From the above it will be seen that curriculum authorities today are thinking of the curriculum in terms of units of work to be done. These units should include desirable activities and at the same time they should be so constructed as to build desirable attitudes and ideals.

QUESTIONS AND EXERCISES

1. What is a curriculum? Who should make it?
2. Can you give specific illustrations to show that the curriculum which you studied in school has molded your thinking?

¹ Harap, Henry, "A Critique of the Present Status of Curriculum Making," *School and Society*, February 19, 1927, Volume 25, page 213.

3. Suppose the subject-matter group completely controlled the making of our curriculum today. How would you expect our curriculum to be different?
4. To what extent should the defects of society be considered in curriculum making?
5. If children were quite generally not interested in a certain subject but adults believed that it should be taught because it would be of value in adult life, should it be taught? Justify your answer.
6. What is the school's job in relation to curriculum making?
7. Compare a modern spelling book with one written twenty-five years ago. What differences do you find?
8. When a normal ten-year-old boy does not like to read, whose fault is it? If you had such a boy as a pupil in your school, what would you do?
9. Compare a modern arithmetic with an arithmetic of twenty-five years ago. What differences do you find?
10. What evil results would you expect from a wrong grade placement of the materials in reading?
11. How do you account for the fact that in our schools we add subjects freely but drop them reluctantly?
12. Suppose you are a teacher and that you are on a committee for revising the curriculum in civics. Draw up a set of principles that you would propose to guide the committee in its work.

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

Write on this page any references you find that bear on this chapter other than those suggested by your instructor.

CHAPTER XXVII

THE MEANING OF EDUCATION

What does education mean to you? This question is asked over and over again, not only in our nation but in all nations of the world. Dr. William John Cooper, United States Commissioner of Education, in an attempt to answer this question for the United States of America says:

Human education is a process of individual growth and development, beginning with birth and ending only with death, requiring at the outset much effort on the part of others in discovering, nourishing, and directing inherent potentialities, but at every stage demanding increasing self-reliance and self-control.

During this entire process, the individual learns to observe and analyze his natural environment, to modify it to his needs, and to adjust himself intelligently to non-alterable conditions; and to comprehend the social environment in which he finds himself, to understand how it came to be what it is and how it can be changed, and to appreciate the mutual "give and take" character of human association to the end that he may not only demand his own rights and opportunities, but also will discharge to the full his economic and social obligations.

The meaning of education changes from decade to decade, and from century to century. In order that the reader may gain a more definite conception of our changing philosophy of education, a brief review of what education has meant to some of the more prominent men who have influenced our educational thought is presented in this chapter.

SOCRATES

Socrates, one of the early philosophers, was born in Athens about 469 B.C.

The philosophy of Socrates was based on (1) a firm conviction of the absolute reality and necessity of virtue, (2) a belief that the one true way to virtue is knowledge, and (3) the resultant conviction that knowledge of things human, of ourselves, is the first essential of wisdom and goodness alike.¹

Socrates was ever striving to arrive at an understanding of himself through an understanding of others. He was concerned primarily with the minds of men. Philosophers before him had been concerned with the trees, the stones, and the stars. Socrates, however, was concerned with "What is man, and what can he become?"

He was primarily interested in developing a new and natural morality in Athens and in saving the Athenian state from destruction. He hoped to accomplish this through the building of character in the youth of Athens.

PLATO

Plato was born in 431 B.C. Like Socrates, his teacher, he held high as an educational aim the virtue of the individual. He says,²

Right conduct presupposes true knowledge, . . . since it is a necessary instrument in bringing man to a consciousness of ignorance and opinion with their attending evils and in providing him with the means of attaining the knowledge that leads to the good.

Plato insisted that there should be careful training for citizenship and that youth should be taught wise health rules as well as good literature and poetry. It was his belief that education for early youth should be largely physical, and that the entire school day should be spent in play.

For the first ten years of life education should be mostly physical; every school a gymnasium and playground; play and sport to be the entire curriculum.³

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1913, Volume 5, page 362.

² *Ibid.*, 1912, Volume 4, page 723.

³ Durant, Will, *Story of Philosophy*, Simon and Schuster, 1926, page 31.

Plato also believed that the ideal state would come when men and women were doing the kind of work for which they were best fitted by nature. He believed that the rulers of the state should be those of the greatest intellectual capacity, and that a sound state was dependent upon the sound education of its rulers.

Plato's educational organization takes the individual and divides his life into stages. In each stage certain specific things are assigned to be taught. Plato says that up to the age of three education should consist solely in caring for the body. From the age of three to six the child should have moral education. The period from seven to ten is the period of physical development, when the child plays and grows physically. From eleven to thirteen, reading and writing are to be taught, and from fourteen to sixteen, poetry and music. The period from sixteen to eighteen is to be devoted to mathematics, and from eighteen to twenty to military exercises. Plato probably did not visualize the nursery school movement and the kindergarten movement as developed in our educational program today, but there are a considerable number of people who will accept in large measure his program up to the tenth year.

ARISTOTLE

Aristotle, a pupil of Plato, was born in Chalcidice in 384 B.C. He believed that education was a life-long task, beginning at birth and continuing until death. It was his theory that the first seven years of the life of the child should be spent in the home, under the direct supervision of the parents. Here he should learn obedience as the first step to an ethical life, but his physical development was to be given chief attention during these early years. From seven to fourteen the child was to enter into direct intellectual training, with which nothing was to interfere.

To Aristotle education included the development of the body, the character, and the intellect. If an individual were properly educated under Aristotle's program he should acquire the

qualities of courage, endurance, self-denial, temperance, truthfulness, and justice. The purpose of education to Aristotle was "to develop the imperfect, untrained child into the well-rounded, intelligent, and patriotic citizen." This was to be achieved through the study of music, gymnastics, drawing, grammar, rhetoric, and mathematics.

Aristotle further believed that "woman should have a part in education in order that she may properly train her children."

Aristotle's program of education was taken largely from Plato. To him, as to Plato, education was "a branch of the practical science of politics; that is, the art of securing happiness for a community of citizens."¹

QUINTILIAN

Quintilian was born in Spain about 38 A.D. It was his theory that education began at infancy and that methods appropriate to the age, disposition, and mental ability of each child should be used. Actual instruction may be given in the seventh year. He insisted that there should be no hurrying in teaching, and that clearness and distinctness of pronunciation should be a primary objective. He discussed tutorial instruction in comparison with the public school, and came to the conclusion that the latter was more desirable "on account of competition, mixing with those of like age, and the noticing of correctness and error in others, and particularly by imitation of other more advanced pupils."²

Quintilian opposed corporal punishment. He regarded grammar as the basis of all studies. In discussing the qualifications of teachers, he urged that elementary teachers as well as those in the higher branches should be well qualified. To Quintilian, character was the end of education and all of education should lead toward that end.

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1911, Volume 1, page 201.

² *The Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 3, page 1383.

ALCUIN

Alcuin, one of the great educators of central Europe during the Middle Ages, was born in or near York about 735 A.D.

On one of his visits to the continent he met Charles the Great in Italy and was invited to leave Britain and make his home in Frankland with a view to the improvement of education in that country. He accepted the invitation, established a palace school, and immediately set about the education of the court. Under Alcuin's influence Charles issued what has been called "the first general charter for education for the Middle Ages." In this charter the abbots were reproved for their illiteracy and were exhorted to the study of letters.

Alcuin was interested in enlisting state aid in fostering education. Although connected with the state, and interested in education primarily for the state, in a letter to Charles he said: ¹

Nothing is a loftier attainment, or a pleasanter exercise, a stronger defense against vice, or more praiseworthy in every way, than studies and learning to which we are exhorted in every page of Scripture.

He told the king that the study of the Scriptures by the young princes would bring them "honor in their old age and finally qualify them for eternal blessedness." ² But the study of secular letters was not to be overlooked. "Let grammar stand as the fundamental study for the tender years of infancy and the other disciplines of philosophical subtlety be regarded as the several ascents of learning by which scholars may mount to the very summit of evangelical perfection. Thus with their increase of years there shall come an increase of the riches of wisdom." ³

¹ West, A. F., *Great Educators and Their Works*, Charles Scribner's Sons, 1909, page 69.

² *Ibid.*

³ *Ibid.*, page 78.

ABELARD

Peter Abelard, "the most famous teacher of the twelfth century," was born near Nantes in 1079.

He has a place in education primarily for his method. "In his *Sic et Non* he abruptly contrasts contradictory texts from the accepted authorities (Gregory, Augustine, etc.) and indicates in the preface that the solution of the contradiction can only come from reason. Here was a vital principle. In his results, Abelard expressed what may be called a moderate realism."¹

Abelard would present the views of opposing authorities, but would offer no solution. He maintained "that the unsolved problem would excite tender readers to a zealous inquiry into the truth, and so sharpen their wits. 'The master-key of knowledge is indeed a persistent and frequent questioning,' for did not Aristotle, the most clear-sighted of all philosophers, desire above all other things to arouse this questioning spirit? 'By doubting we come to examine, and by examining we come to the truth.'"²

ROGER BACON

Roger Bacon, "the most profound thinker and perhaps the most learned man of the thirteenth century," was born in England in 1214.

Bacon was an uncompromising critic of the methods of education in his time, and is probably remembered best because he championed the use of the inductive method. "He pointed to the study of languages and mathematics as affording the true basis for a sound system of education. . . . An infinitely greater thinker than his later namesake, Francis Bacon (*q.v.*), he had the same universality of mind, the same desire to provoke a divine discontent in the minds of men, the same deter-

¹ *The Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 3, page 1486.

² Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1911. Volume 1, page 8.

mination to go back to reality and to sweep away the shams and unrealities of current intellectual life.”¹

He is entitled to a place in education because of his work as a teacher, a critic of schoolbooks, a writer of educational handbooks, “and as the establisher of the tradition of free inquiry which has led to the opening out of many new paths in the world of thought and science.”²

PETRARCH

Petrarch, called “the first modern man,” “the first of the humanists,” “the restorer of classical learning,” and “the leader of the New Learning,” was born at Arezzo in Italy in 1304.

Petrarch’s life embodied the spirit of the Renaissance. He was a courageous man and did not hesitate to attack the most revered traditions. The meaning that education held for Petrarch becomes apparent as his ideal of self-culture is noted and studied. He believed in the “development of a free, enlightened personality, through the medium of classic prose and verse.”³ There was in his ideal of self-culture “the tendency to define self-culture as aesthetic and literary appreciation rather than in terms of a dominating social and moral conviction.”⁴

“Against the dominant educational ideas of the times, against scholasticism and Aristotelianism, Petrarch strove with all his might. . . . He created a general interest in the classics in direct opposition to the ordinarily accepted interest of students, of institutions of learning, of Church and of Churchmen. Petrarch . . . holds a place in the history of education as the first great representative of a new type of intellectual life.”⁵

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1911, Volume 1, page 316.

² *Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 1, page 136.

³ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1913, Volume 4, page 661.

⁴ *Ibid.*

⁵ Monroe, Paul, *A Textbook in the History of Education*, The Macmillan Company, 1911, pages 358-359.

VITTORINO DA FELTRE

Vittorino was born at Feltre in 1378 and was educated at the University of Padua. Like the early philosophers, he was concerned largely with strengthening religious life and character. He had a desire to "combine the spirit of the Christian life with the educational apparatus of the classical literature, whilst uniting with both something of the Greek passion for bodily culture and for dignity of the outer life."¹

It is said of him that he removed all arrogance and placed all men of scholarly attainments on the same footing of plain and sober living. He is said to have shared with his pupils in games and excursions, and that he refused to force lessons on unwilling learners. He believed in regular exercise in all conditions of weather, because exercise was to him the foundation of health and health was "the first necessity of mental progress."²

Vittorino's aim was to develop harmoniously the mind, body, and character. The mind was to be developed through the literature of Greece and Rome; the body through physical exercises; and character through Christian teaching. It is interesting to note that Vittorino's theory of education called for "due alternation of subjects, the uniform development of the faculties, the dependence of mental upon physical conditions, the logical ordering of the lessons, the choice of stimulus, the careful observation of the child's mental powers."³

ERASMUS

Erasmus was born at Rotterdam in 1466. The ultimate end of education to him was "the production of devout and instructed leaders in Church and State, owning allegiance not only to city or nation, but to the republic of learning and the Church Universal."⁴

¹ Woodward, W. H., *Vittorino da Feltre and Other Humanist Educators*, Cambridge University Press, 1897, page 27.

² *Ibid.*, page 35.

³ *Ibid.*, page 64.

⁴ *The Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 2, page 580.

Erasmus typifies the process of the transfer of the New Learning to northern and western Europe. Differing from the great Italians, Erasmus was inspired by a definitely religious end—the amending of social conditions by the absorption of ancient culture. Hence, education aimed at training men and women for social service in Church or State, in the home, the city, the school, and university. By such education, nations might gradually attain to that universal reign of peace and law presented by the Roman Empire in its prime.¹

Erasmus held that all knowledge vital to humanity could be found in Greek and Latin. The teaching of vernacular languages was to be discouraged. He felt that their use tended to keep the nations of the world divided, causing misunderstanding and war. He disliked all appeals to passion or partisanship. His hope for the world was in the growing sway of reason.

At the time of Erasmus girls were poorly provided for in an educational way. He felt that such neglect was a grave mistake, and that they should be trained with the same care as boys. He held, according to Woodward, that “to uplift the standard of home life and of the status of women, it was of prime necessity to provide fuller interests, a wider outlook, and keener intellectual activities for girls.”²

ROGER ASCHAM

Roger Ascham, born in Yorkshire in 1515, is remembered primarily for introducing a new method of discipline—a method of kindness and gentleness as against the harsh, cruel practices of his age. A school, according to Ascham, should be a place of “play and pleasure, not of fear and bondage.” “Love is better than fear, gentleness better than beating, to bring up a child rightly in learning.”³ He is credited with introducing a new method of teaching Latin, in which the Latin was first translated into English and then back again into Latin. He strenuously opposed the current practice of his day in requiring the memorizing of grammatical rules and formulae prior to

¹ *Ibid.*

² *Ibid.*, page 581.

³ Fitch, Sir Joshua Girling, *Educational Aims and Methods*, The Macmillan Company, 1900, page 225.

actual study of the Latin language. This might very well be called the first step toward the direct method of teaching languages in use today.

"His place in the history of education," writes Fitch,¹ "is that of one who regarded with sympathy the older classical discipline, as well as the new revival of interest in Greek, but who looked with fresh eyes upon the traditional methods of teaching, and suggested some rational and practical improvements."

In fact, he accepted without criticism the traditional education of his day so far as content is concerned. He was concerned about the aim of education, and for him the aim was moral character. As an adherent of the reformed faith he probably would not have separated morality and religion. But his major concern was the method of instruction both in procedure and in discipline, and herein lies his greatest contribution to educational development.

MARTIN LUTHER

Martin Luther was born in Eisleben in 1483. As a young man he was greatly troubled because "the common people know nothing at all of Christian doctrines, and many pastors are well-nigh unskilled and incapable of teaching."

He recommended schools for the training of preachers, jurists, scribes, physicians, schoolmasters, and rulers. He believed that children should go to school an hour or two each day and that the rest of the day should be utilized in learning an occupation or in doing housework. He was an ardent advocate of compulsory education. He said, "If magistrates may compel their sturdy subjects to handle musket and pike in war, how much more should they compel subjects to keep their children at school. For there is a worse war to be waged with the devil, who is busied secretly thus to impoverish towns and principality through the absence of education."

In a letter to the Elector John in 1526, he says,²

¹ *Ibid.*, page 228.

² Painter, F. V. N., *Luther on Education*, Concordia Publishing Company, page 137.

Where there are towns and villages which have the ability, your electoral grace has the power to compel them to maintain schools, pulpits, and parishes. If they will not do it from a consideration for their salvation, then your electoral grace, as highest guardian of the youth and of all others needing supervision, is to compel them to do so, just as they are compelled to render contributions and services toward bridges, paths, and roads, or other matters pertaining to the public interest.

Education was conceived by him as an essential preparation for the ordinary duties of life in the home, vocation, civic life, and the church.

PHILIP MELANCHTHON

Philip Melanchthon, the great German reformer, was born at Britten in 1497. He became famous and active as the great consultant on educational problems. He represented the view that proper grammatical drill was a necessary foundation for the acquirement of a language against those who tended to rely too greatly on conversational and reading methods.

Melanchthon summarized his educational ideals in an address at the opening of the Nuremberg school. He said it was "the divine purpose that children be trained to piety and virtue, and only through the sciences can religion and good laws be maintained; the sciences are a gift of God; hence impiety and ignorance go together."¹

He was instrumental in organizing the city school systems in Germany in connection with the new gymnasia founded either by municipalities or princes. In his earlier life he was busy with elementary education and with the Saxon "visitation" of village schools. He directed that primary instruction should be confined to Latin and that music should be taught for an hour every afternoon.

Perhaps Melanchthon's greatest accomplishment was the reform of the universities. He was an ardent advocate of pure

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1913 Volume 4, page 190.

scholarship in the professional curricula. "He was filled with the humanist conviction that a knowledge of the content of classical literature would bring manifold illumination to the human mind. . . . 'A theologian,' he said, 'must be, first, a linguist; second, a dialectician.'" ¹

RABELAIS

Rabelais, born at Chinon, France, in 1483, was among the early realists in education. Luther and Melancthon represented the reformation in the educational program. Rabelais, like his predecessors, was concerned with the elevation of character and with the advancement of human knowledge; but unlike some of his predecessors, he was not so much interested in having pupils always browsing in books as he was in having them study things as such. He wanted his pupils to think of work as an agreeable pastime, rather than a task to be mastered. He seemed to be concerned with making study interesting and profitable by making it active.

BACON

Francis Bacon was born in England in 1561. He was sent to Trinity College at the age of twelve, where he remained for a period of three years. He left this institution with "a strong dislike of its texts and methods, a confirmed hostility to the cult of Aristotle, and a resolve to set philosophy into a more fertile path, to turn it from scholastic disputation to the illumination and increase of human good." ²

Bacon's philosophy of education may be gained in part from the following quotation from his essay on "Custom and Education": ³

¹ *Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 3, page 1069.

² Durant, Will, *The Story of Philosophy*, Simon and Schuster, 1926, pages 118-119.

³ *Harvard Classics*, P. F. Collier and Son, 1909, Volume 3, page 104.

Therefore, since custom is the principal magistrate of man's life, let men by all means endeavor to obtain good customs. Certainly custom is most perfect when it beginneth in young years: this we call education; which is, in effect, but an early custom. So we see, in languages the tongue is more pliant to all expressions and sounds, the joints are more supple to all feats of activity and motions, in youth than afterwards. For it is true that late learners can not so well take the ply; except it be in some minds that have not suffered themselves to fix, but have kept themselves open and prepared to receive continual amendment, which is exceeding rare.

RATKE

Ratke was born in Holstein in 1571. He believed that by using the German language in the earlier years he could bring about the use of a common language among the German people. In this way he hoped to lay the foundation for unity of government and religion, and to teach to the children a knowledge of the useful arts and sciences.

His chief maxims were: (1) Everything after the order and course of nature; (2) one thing at a time; (3) one thing again and again repeated; (4) nothing shall be learned by heart; (5) uniformity in all things; (6) knowledge of the thing itself must be given before that which refers to the thing; (7) everything by experiment and analysis.

JOHN AMOS COMENIUS

Comenius is commonly called "the pioneer of modern educational science."¹ He was born in Moravia, March 28, 1592, and received his early education in the local schools of his country.

While still a youth, Comenius detected defects both in the methods of instruction and the classroom organization in the schools. In writing of the schools of the country he said,²

They are the terror of the boys, and the slaughter-houses of minds, places where a hatred of literature and books is contracted, where

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1911, Volume 2, page 135.

² Laurie, Simon S., *John Amos Comenius*, Cambridge University Press, 1893, page 23.

ten or more years are spent in learning what might be acquired in one, where what ought to be poured in gently, is violently forced in and beaten in . . . places where minds are fed on words.

Comenius believed that it was the purpose of education to "foster man's inborn tendencies to social life, to acquire knowledge, and to look to God. All human beings were equally entitled to an education without distinction of rank, sex, or ability. The duller pupils require more help than the bright. As for women, they are as capable as the man, and in fact 'the more we occupy their thoughts, the less will there be place for the rashness which springs from empty minds.'" ¹

Comenius named four types of schools for the system of education that he would have the state provide:

(1) The School of Infancy, up to the age of 6 years; (2) the School of the Mother-tongue, from 6 years to 12 years; (3) the Latin School, from 12 to 18 years; (4) the University from 18 to 24 years. He thus is the pioneer of modern national educational systems—for these divisions roughly correspond with our kindergarten, elementary, secondary, and college divisions.²

JOHN LOCKE

John Locke was born in England in 1632.

Thomas Fowler in his book on Locke explains Locke's educational philosophy as follows: ³

In the cultivation of the mind far more importance is attached to the formation of virtuous habits, and even of those social qualities which go by the name of "good breeding" than to the mere inculcation of knowledge. I place virtue as the first and most necessary of those endowments that belong to a Man or a Gentleman—as absolute requisite to make him valued and beloved by others acceptable or tolerable to himself. Wisdom, that is to say, "a man's managing his business ably and with foresight in this world" comes next in order. In the third place is Good Breeding. . . . Learning . . . he puts last.

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1911, Volume 2, page 139.

² *Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 1, page 363.

³ Fowler, Thomas, *Locke*, Harper and Brothers, 1880, pages 168-169.

In John Locke's *Some Thoughts on Education* it is stated that a healthy body is necessary to a healthy, progressive mind. He emphasizes the physical condition of the child.

Locke had an interesting theory concerning the learning of a trade. He said, "It is well also that the young gentleman should learn a Trade, a manual Trade; . . . and not so much for the Trade's sake as for useful diversion in his leisure hours." ¹

He is frequently quoted as being a strong advocate of travel as a means of education. It was his theory that travel was necessary "to finish the Work and complete the Gentleman." ²

In the last paragraph of *Some Thoughts on Education* he says that "there are possibly scarce two Children who can be conducted by exactly the same Method," and urges the readers to "dare venture to consult their own Reason in the Education of their Children, rather than wholly to rely upon old Custom." ³

ROUSSEAU

Jean Jacques Rousseau was born in Geneva on June 28, 1712.

The meaning that he attached to education may be made clear from a statement of his *Émile*: ⁴

All that we have not at our birth, and that we need when grown up, is given us by education.

This education comes to us from nature itself, or from other men, or from circumstances. The internal development of our faculties and of our organs is the education nature gives us; the use we are taught to make of this development is the education we get from other men; and what we learn by our own experience about things that interest us is the education of circumstances.

Rousseau expresses in four maxims his attitude toward the early education of children: ⁵

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, New York, 1913, Volume 4, page 59.

² Locke, John, *Some Thoughts on Education*, Cambridge University Press, 1880, page 184.

³ *Ibid.*, pages 187-188.

⁴ Rousseau, Jean Jacques, *Émile*, D. C. Heath and Company, 1883, page 12.

⁵ *Ibid.*, pages 32-33.

Far from having too much strength, children have not even enough for all that nature demands of them. We ought, then, to leave them the free use of all natural strength which they can not misuse. First maxim.

We must aid them, supplying whatever they lack in intelligence, in strength, in all that belongs to physical necessity. Second maxim.

In helping them, we must confine ourselves to what is really of use to them, yielding nothing to their whims or unreasonable wishes. For their own caprice will not trouble them unless we ourselves create it; it is not a natural thing. Third maxim.

We must study carefully their language and their signs, so that, at an age when they cannot dissemble, we may judge which of their desires spring from nature itself, and which of them from opinion. Fourth maxim.

The meaning of these rules is to allow children more personal freedom and less authority; to let them do more for themselves and exact less from others. Thus accustomed betimes to desire only what they can obtain or do for themselves, they will feel less keenly the want of whatever is not within their own power.

PESTALOZZI

Johann Heinrich Pestalozzi was born at Zurich in 1746. He attended the schools of Zurich from the elementary school through the Collegium Publicum, but according to his own testimony the instruction, excellent as it was as regards its intrinsic value, contributed nothing toward developing practical sense.¹

Pestalozzi's philosophy of education is best known through his novel *Leonard and Gertrude*. An exposition of his ideas concerning methods of education is found in *How Gertrude Teaches Her Children*. In this latter volume he shows how in teaching we should proceed from the easier to the more difficult. "To begin with observation, to pass from observation to consciousness, from consciousness to speech."²

¹ Pinloche, Auguste, *Pestalozzi and the Foundation of the Modern Elementary School*, Charles Scribner's Sons, 1901, page 6.

² *Encyclopædia Britannica*, Encyclopædia Britannica, Incorporated, 1929, Volume 17, page 639.

"Had Pestalozzi been required to characterize, briefly, his conception of education, he would doubtless have designated it an education according to nature." ¹ Education according to nature does not mean, to him, leaving education to nature and discipline to natural consequences. He says, "Instruction should help nature develop in her own way and should adapt the course of nature to the aim of education." ²

In *Leonard and Gertrude* he says, "The proper education of the youthful population is the only means of elevating the conditions of a corrupt village." ³ Even though he regarded the education of the lowest class as its salvation, he believed that one should not be educated above his station in life. "Man is only happy and secure in this world when he is so developed as to be able to fill well that place in society to which he can legitimately lay claim." ⁴

Pestalozzi's ideas of the function of the school and the duties of the teachers are expressed in the following statement: ⁵

You should do for your children what the parents fail to do for them. The reading, writing, and arithmetic are not, after all, what they most need; it is all well and good for them to learn something, but the really important thing is for them to be something,—for them to become what they are meant to be, and in becoming which they so often have no guidance or help at home.

HERBART

Johann Friedrich Herbart was born in Oldenburg, Germany, May 4, 1776. His philosophy of education is summed up in the following statement: ⁶

The ultimate purpose of instruction is contained in the notion, virtue. But in order to realize the final aim, another and nearer

¹ Rusk, Robert Robertson, *The Doctrine of the Great Educators*, Macmillan and Company, Limited, London, 1926, page 177.

² Pestalozzi, Johann Heinrich, *How Gertrude Teaches Her Children*, page 26.

³ Pestalozzi, Johann Heinrich, *Leonard and Gertrude*, Ginn, Heath and Company, 1885, page 135.

⁴ *Ibid.*, page 174.

⁵ *Ibid.*, page 152.

⁶ Herbart, John Frederick, *Outlines of Educational Doctrine*, The Macmillan Company, 1901, page 44.

one must be set up. We may term it, many-sidedness of interest. The word interest stands in general for that kind of mental activity which it is the business of instruction to incite. Mere information does not suffice; for this we think of as a supply or store of facts, which a person might possess or lack, and still remain the same being. But he who lays hold of his information and reaches out for more takes an interest in it. Since, however, this mental activity is varied we need to add the further determination supplied by the term many-sidedness.

The placing of interest in education according to Dr. Watson had never been satisfactorily determined before Herbart. The *Encyclopedia and Dictionary of Education* says: ¹

The placing of the concept of "interest" in the central educational place—linking (secular) instruction on the one side with the (sacred) things of character and conduct on the other—was a notable step to educational clarity.

Herbart is probably best remembered by students of education for his five formal steps of a lesson. Monroe says that Herbart did not distinguish the formal steps of method, "with the precision and finality that have been claimed by his followers; on the contrary, the steps were to him the factors in the process of thinking rather than the logical subdivisions of a lesson period. The formal steps are useful, however, in many lessons whose primary object is to impart theoretical information; while the analysis at present most in favor is into preparation, presentation, association, generalization, and application. . . . The essential principle of Herbart's theory of education is the dependence of the character upon knowledge. 'Great moral energy is the result of broad views, and of whole unbroken masses of thought.'" ²

FROEBEL

Friedrich Froebel, the founder of the kindergarten, was born in 1782 at Oberweissbach, a village of Thuringia, Germany.

¹ *Encyclopedia and Dictionary of Education*, Sir Isaac Pitman and Sons, London, 1922, Volume 2, page 794.

² Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1911, Volume 3, page 252.

He began his teaching career in 1805 in the city of Frankfort. Soon after he made a trip to visit Pestalozzi in Switzerland. He seems to have been deeply impressed with the work that Pestalozzi was doing, for shortly after his visit he left the school where he was teaching and accepted the tutorship of three boys. In 1808 he took these pupils to Yverdon and lived in close association with the Pestalozzian institution.

The death of a brother in 1816 left Froebel guardian of his brother's children. He saw a chance now to start a school to be conducted upon a psychological and scientific basis. It was not long after this that he began to write. *The Education of Man* appeared in 1826. In 1834 he offered a training course for teachers at Burgdorf. Here he opened an orphanage in 1834.

His interest in children continued to grow. In 1837 the first kindergarten was opened at Blankenburg, although this school was not called a kindergarten until 1840. Froebel offered a training course for kindergarten teachers in Liebenstein in 1849. Froebel's philosophy of education aroused bitter opposition and on August 7, 1851, kindergartens were prohibited.

Froebel believed that man is of nature, of humanity, and of God; that all things are pervaded by a universal law—by an underlying unity which is God.

Education consists in leading man, as a thinking, intelligent being, growing into self-consciousness, to a pure and unsullied, conscious and free representation of the inner law of Divine Unity, and in teaching him ways and means thereto.¹

Froebel believed in the teaching of nature, that man has within himself unity, diversity, and individuality, corresponding to aspects of his nature as divine, natural, and human. Education should bring out these aspects, that is, self-activity.

Froebel's educational creed as condensed in *Americana* is:²

The education of the child should begin with its birth, and should be threefold, addressing the mental, spiritual, and physical natures.

¹ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1914, Volume 2, page 720.

² *Encyclopedia Americana*, The Americana Corporation, New York City, 1919, Volume 12, page 116.

It should be continued as it has begun, by appealing to the heart and the emotions as the starting point of the human soul.

There should be sequence, orderly progression, and one continuous purpose, throughout the entire scheme of education, from kindergarten to university.

Education should be conducted according to nature, and should be free, spontaneous growth—a development from within, never a prescription from without.

The training of the child should be conducted by means of the activities, needs, desires, and delights which are the common heritage of childhood.

The child should be led from the beginning to feel that one life thrills through every manifestation of the universe, and that he is a part of all that is.

The object of education is the development of the human being in the totality of his powers as a child of nature, a child of man, and a child of God.

According to the *Encyclopedia and Dictionary of Education*, Volume 2, page 656

Froebel was essentially a psychologist. Much of his psychology is now disproved, but all of it was distinctly in advance of his own age.

He recognized that although development must necessarily vary greatly with the individual child, there were yet certain principles governing it that might be generally accepted.

Perhaps the most important of these was his theory of continuity. All development, he felt, must depend on the "connectedness of humanity," on what we should now call heredity, *i.e.*, what the individual has inherited from previous generations. Here, of course, Froebel diverges widely from Herbart who denied the presence of innate ideas and faculties in the child.

HERBERT SPENCER

Herbert Spencer was born at Derby, England, in 1820. He attempted to answer for his time the question "What education is of most worth?" To do this he felt it necessary to classify the leading kinds of activity which constitute human life in the order of their importance. Mr. Spencer said that they might be naturally arranged into:¹

¹ Spencer, Herbert, *Education, Intellectual, Moral, and Physical*, D. Appleton and Company, 1920, pages 13-14.

1. Those activities which directly minister to self-preservation.
2. Those activities which, by securing the necessities of life, indirectly minister to self-preservation.
3. Those activities which have for their end the rearing and discipline of offspring.
4. Those activities which are involved in the maintenance of proper social and political relations.
5. Those miscellaneous activities which make up the leisure part of life, devoted to the gratification of the tastes and feelings.

Mr. Spencer would say, then, that the education of most worth is "that education which prepares for direct self-preservation; that which prepares for indirect self-preservation; that which prepares for parenthood; that which prepares for citizenship; that which prepares for the miscellaneous refinements of life." ¹

Of course, the ideal of education is—complete preparation in all these divisions. But failing this ideal, as in our phase of civilization everyone must do more or less, the aim should be to maintain a due proportion between the degrees of preparation in each. Not exhaustive cultivation in any one, supremely important though it may be—not even an exclusive attention to the two, three, or four divisions of greatest importance; but an attention to all,—greatest where the value is greatest, less where the value is less, least where the value is least. For the average man . . . the desideratum is a training that approaches nearest to perfection in the things which most subserve complete living, and falls more and more below perfection in the things that have more and more remote bearings on complete living.²

Spencer's educational thinking may be understood more clearly from a statement in the *Cyclopedia of Education*:³

In place of ignorant neglect of physical training, he pleads for rational, scientific education of the body; instead of arbitrary, and artificial means of moral development, he asks that natural and reasonable plans be adopted; and in place of the old-time principles

¹ *Ibid.*, page 16.

² Spencer, Herbert, *Education, Intellectual, Moral, and Physical*, D. Appleton and Company, 1920, pages 17-18.

³ Monroe, Paul, *Cyclopedia of Education*, The Macmillan Company, 1914, Volume 5, page 401.

of authority and pain in educating intellect, he advocates, at times with convincing eloquence, the doctrines of self-activity and interest.

JOHN DEWEY

John Dewey, the only American to be included in this list of men who have built our educational philosophy, was born in Burlington, Vermont, in 1859. He was graduated from the University of Vermont in 1879 and received the degree of Doctor of Philosophy from Johns Hopkins University in 1884. Dr. Ernest C. Moore, President of the University of California at Los Angeles, says that there are five great philosophers of education: Socrates, Plato, John Locke, Herbart, and John Dewey.

Dr. Moore summarizes Dewey's philosophy of education as follows:¹

Knowledge is activity, selecting purposes, employing the resources of experience, and not repeating its achievements of the day before, but out of its requirements of the past creating new requirements to meet the new demands of the new moment, the new hour, the new day, which calls forth its functions.

In his *Democracy and Education* John Dewey tells us what education means to him. He says:²

Education is a constant reorganizing or reconstructing of experience. It has all the time an immediate end, and so far as activity is educative, it reaches that end—the direct transformation of the quality of experience. Infancy, youth, adult life—all stand on the same educative level in the sense that what is really *learned* at any and every stage of experience constitutes the value of that experience, and in the sense that it is the chief business of life at every point to make living thus contribute to an enrichment of its own perceptible meaning.

We thus reach a technical definition of education: It is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience.

¹ *School and Society*, January 11, 1930, Volume 31, page 41.

² Dewey, John, *Democracy and Education*, The Macmillan Company, 1916, pages 89–90.

He discusses the relation of growth to education and ends by giving us a criterion for school education: ¹

Since growth is the characteristic of life, education is all one with growing; it has no end beyond itself. The criterion of the value of school education is the extent in which it creates a desire for continued growth and supplies means for making the desire effective in fact.

The relation of states to education is expressed by Dr. Dewey as follows: ²

School facilities must be secured of such amplitude and efficiency as will in fact and not simply in name discount the effects of economic inequalities, and secure to all the wards of the nation equality of equipment for their future careers. Accomplishment of this end demands not only adequate administrative provision of school facilities, and such supplementation of family resources as will enable youth to take advantage of them, but also such modification of traditional ideals of culture, traditional subjects of study and traditional methods of teaching and discipline as will retain all the youth under educational influences until they are equipped to be masters of their own economic and social careers.

Students of education always remember Dr. Dewey for the statement that "Education is life; that is, education is a process of living and not a preparation for future living." ³

QUESTIONS AND EXERCISES

1. Who was a sixteenth century advocate of compulsory education? What did compulsory education mean to him?
2. Study the development of the education of girls and women and report to the class the results of your study.
3. What is the educational meaning of the Renaissance? Name some of the men of the Renaissance period.
4. John Locke is generally considered a representative of the disciplinary conception of education. Explain how he represents this conception of education.

¹ Dewey, John, *Democracy and Education*, The Macmillan Company, 1916, page 62.

² *Ibid.*, page 114.

³ Dewey, John, *My Pedagogic Creed*, The Progressive Education Association, Washington, D.C., 1929, page 6.

5. What is meant by the naturalistic tendency in education?
6. Study the development of kindergarten education and report your findings to the class.
7. Study the development of the nursery school in the United States and report the results of your study.
8. Explain the difference between these two statements:
 "Education is preparation for life."
 "Education is life."
9. How do the following men define education: William H. Kilpatrick, Boyd H. Bode, David Snedden, Charles H. Judd, Frank McMurry, Nicholas Murray Butler.
10. Write in fifty words what education means to you.

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ADDITIONAL REFERENCE LISTS

Write on this page any references for this chapter which may be suggested by your instructor.

ADDITIONAL REFERENCE LISTS

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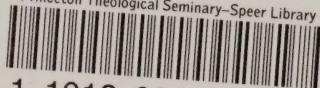
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